# Potential Flow Forces and Moments from Selected Ship Flow Codes in a Set of Numerical Experiments

# Appendix D — Time History Plots for Prescribed Roll Motion of Model 5514

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# Report Documentation Page

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D–1115. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1255

D–1116. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1255
D–1117. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1257
D–1118. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1257
D–1119. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1259
D–1120. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1259
D–1121. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1261
D–1122. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1261
D–1123. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1263
D–1124. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1263
D–1125. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1265
D–1126. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1265
D–1127. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1267

D–1128. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1267
D–1129. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1269
D–1130. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1269
D–1131. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1271
D–1132. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1271
D–1133. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1273
D–1134. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1273
D–1135. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1275
D–1136. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1275
D–1137. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1277
D–1138. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1277
D–1139. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1279

D–1140. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D–1279

## Introduction

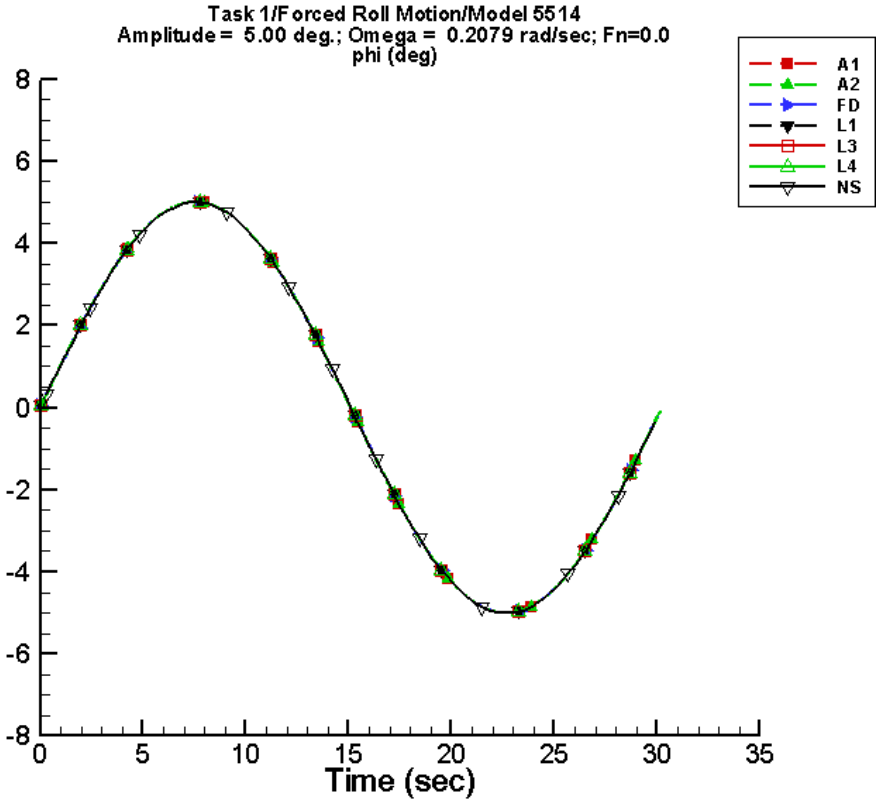
This appendix contains all the plots and tables for the simulations involving 1-DOF prescribed roll motion of Model 5514 scaled to the length 142 m. Each of Figures D–1 through D–570 contains time-history plots of the results from all codes for a single variable during one period of motion. If the code runner did not supply the data, the data vanish identically, or the data are insufficient for a single period, there is no curve for that code. The lack of data in any figure has been noted immediately below the figure. As necessary, the time that appears on the horizontal axis has been shifted so that the roll angle is of the form $\phi = \phi_a \sin \omega t$ for some amplitude $\phi_a$ and some frequency $\omega$. Furthermore, the time $t$ has been replaced by $t \mod T_e$ where $T_e$ is the period of the motion.

Tables D–1 through D–1140 contain information related to the results depicted in the figures. Two tables follow each figure. The first table gives estimates of the mean value and the amplitudes and phases of the first and second harmonics obtained by Fourier analysis. The second table gives the minimum and maximum of the variable plotted in the figure. The minimum and maximum of both the filtered and unfiltered variable are provided. However, the plot itself was obtained from unfiltered data unless the data were already filtered by the code runner, as is the case for the results from NFA.

Appendix N contains plots and tables for the behavior of the minimum and the maximum of each variable plotted in this appendix versus the roll amplitude $\phi_a$.

The frequencies and amplitudes of the prescribed roll motions of task 1 are the same for both Models 5514 and 5613 and for both speeds corresponding to Froude numbers 0.0 and 0.3. The highest frequency for the prescribed roll motion in task 1 differs from the highest frequency for the prescribed heave and pitch motions of task 1. The frequencies and amplitudes of the prescribed roll motion are given in the main part of the report and are also here for ease of reference:

| **Roll Motion $\phi = \phi_a \sin(\omega t)$** Rotation Point about VCG | | | | | |
|---|---|---|---|---|---|
| **Roll Amplitudes $\phi_a$** | | | | | |
| $\phi_a$ (°) | 5 | 15 | 30 | 45 | 65 |
| Roll Frequencies $\omega$ | | | | | |
| $\omega_1$ (rad/s) | 0.2079 | 0.2079 | 0.2079 | 0.2079 | 0.2079 |
| $\omega_2$ (rad/s) | 0.3831 | 0.3831 | 0.3831 | 0.3831 | 0.3831 |
| $\omega_3$ (rad/s) | 0.672 | 0.672 | 0.672 | 0.672 | 0.672 |




Data identically zero, insufficient, or not available from NFA.

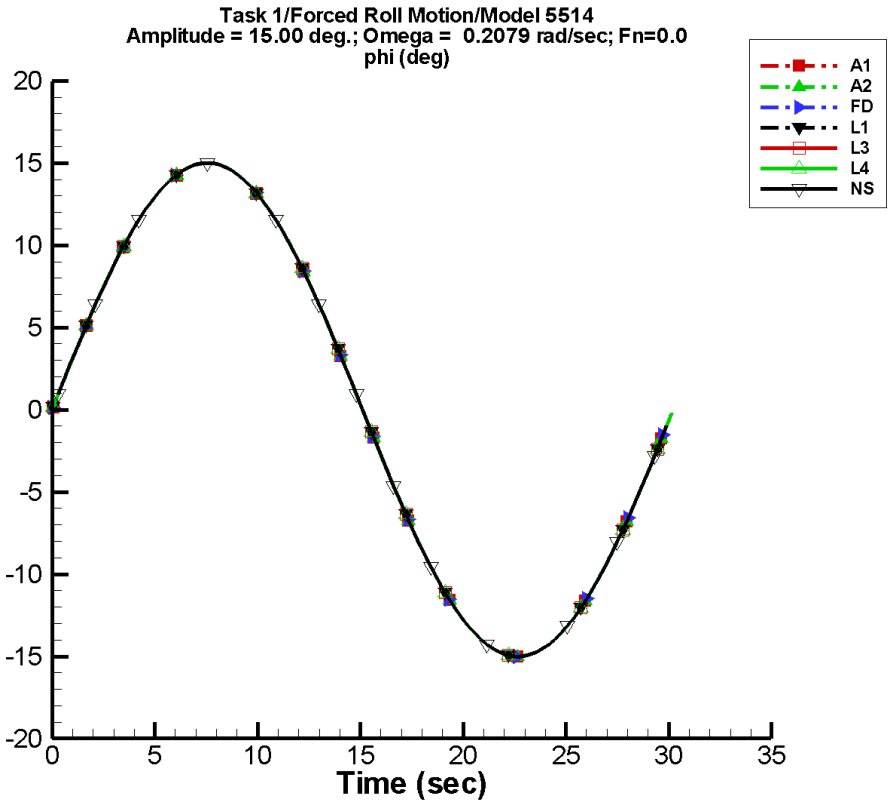
Figure D–1. Time history of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.69E-06 | 5.00 | 0 | 5.18E-06 | -21 |
| A2 | -3.69E-06 | 5.00 | 0 | 5.18E-06 | -21 |
| FD | 1.60E-07 | 5.00 | 0 | 6.54E-07 | 31 |
| L1 | -5.24E-06 | 5.00 | 0 | 8.69E-07 | -32 |
| L3 | -5.24E-06 | 5.00 | 0 | 8.69E-07 | -32 |
| L4 | -5.24E-06 | 5.00 | 0 | 8.69E-07 | -32 |
| NF | — | — | — | — | — |
| NS | 4.90E-07 | 5.00 | 0 | 5.45E-07 | 52 |

Table D–2. Minimum and maximum of of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -5.00 | 5.00 | -5.00 | 5.00 |
| A2 | -5.00 | 5.00 | -5.00 | 5.00 |
| FD | -5.00 | 5.00 | -4.99 | 4.99 |
| L1 | -5.00 | 5.00 | -5.00 | 5.00 |
| L3 | -5.00 | 5.00 | -5.00 | 5.00 |
| L4 | -5.00 | 5.00 | -5.00 | 5.00 |
| NF | — | — | — | — |
| NS | -5.00 | 5.00 | -4.95 | 4.95 |




Data identically zero, insufficient, or not available from NFA.

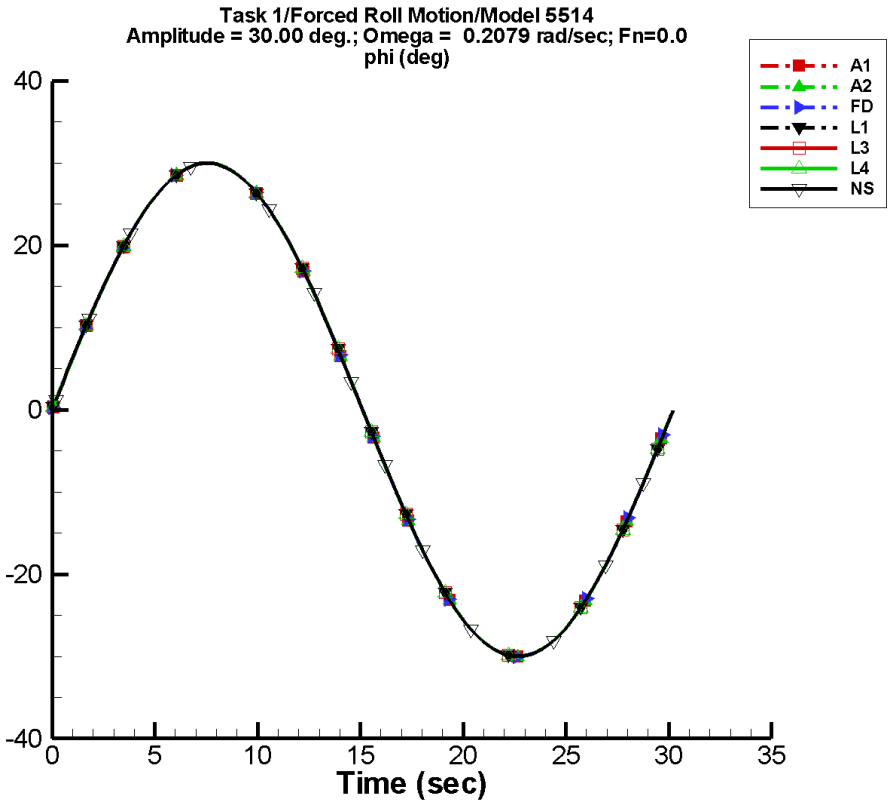
Figure D–2. Time history of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–3. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.17E-05 | 15.0 | 0 | 1.42E-05 | -20 |
| A2 | -1.17E-05 | 15.0 | 0 | 1.42E-05 | -20 |
| FD | -3.88E-07 | 15.0 | 0 | 2.68E-06 | 35 |
| L1 | 6.20E-06 | 15.0 | 0 | 4.39E-06 | -49 |
| L3 | 6.20E-06 | 15.0 | 0 | 4.39E-06 | -49 |
| L4 | 6.20E-06 | 15.0 | 0 | 4.39E-06 | -49 |
| NF | — | — | — | — | — |
| NS | 1.98E-06 | 15.0 | 0 | 9.86E-07 | -14 |

Table D–4. Minimum and maximum of of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -15.0 | 15.0 | -15.0 | 15.0 |
| A2 | -15.0 | 15.0 | -15.0 | 15.0 |
| FD | -15.0 | 15.0 | -15.0 | 15.0 |
| L1 | -15.0 | 15.0 | -15.0 | 15.0 |
| L3 | -15.0 | 15.0 | -15.0 | 15.0 |
| L4 | -15.0 | 15.0 | -15.0 | 15.0 |
| NF | — | — | — | — |
| NS | -15.0 | 15.0 | -14.9 | 14.9 |




Data identically zero, insufficient, or not available from NFA.

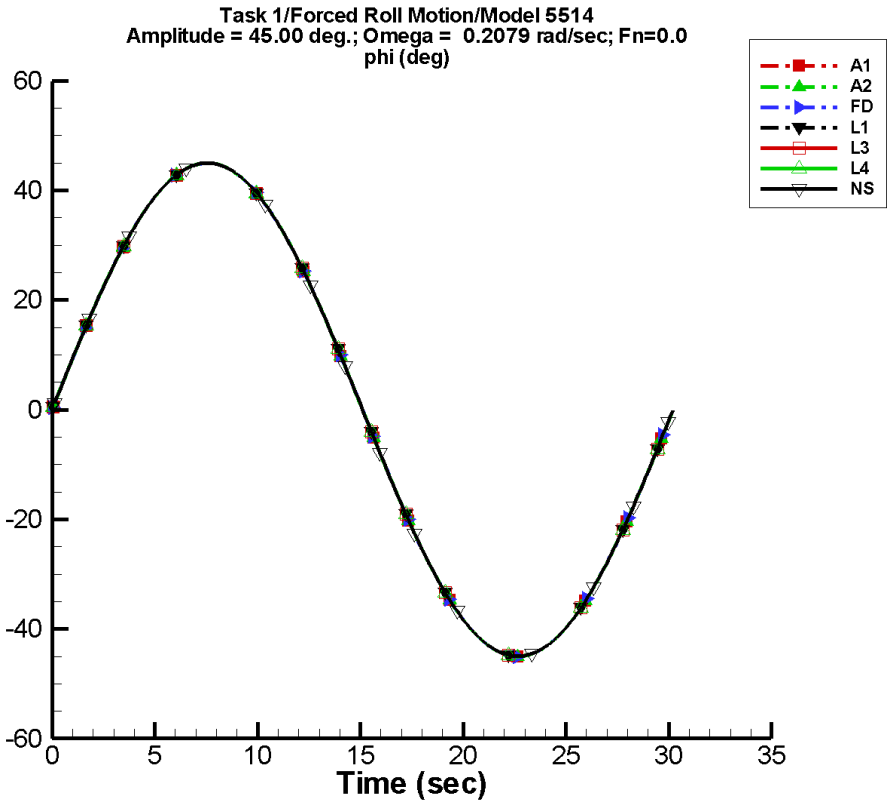
Figure D–3. Time history of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–5. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.30E-05 | 30.0 | 0 | 2.74E-05 | -18 |
| A2 | -2.30E-05 | 30.0 | 0 | 2.74E-05 | -18 |
| FD | -2.43E-06 | 30.0 | 0 | 4.51E-06 | 64 |
| L1 | 3.60E-06 | 30.0 | 0 | 6.23E-06 | 2 |
| L3 | 3.60E-06 | 30.0 | 0 | 6.23E-06 | 2 |
| L4 | 3.60E-06 | 30.0 | 0 | 6.23E-06 | 2 |
| NF | — | — | — | — | — |
| NS | 1.84E-06 | 30.0 | 0 | 2.16E-06 | 133 |

Table D–6. Minimum and maximum of of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -30.0 | 30.0 | -30.0 | 30.0 |
| A2 | -30.0 | 30.0 | -30.0 | 30.0 |
| FD | -30.0 | 30.0 | -30.0 | 30.0 |
| L1 | -30.0 | 30.0 | -30.0 | 30.0 |
| L3 | -30.0 | 30.0 | -30.0 | 30.0 |
| L4 | -30.0 | 30.0 | -30.0 | 30.0 |
| NF | — | — | — | — |
| NS | -30.0 | 30.0 | -29.9 | 29.9 |




Data identically zero, insufficient, or not available from NFA.

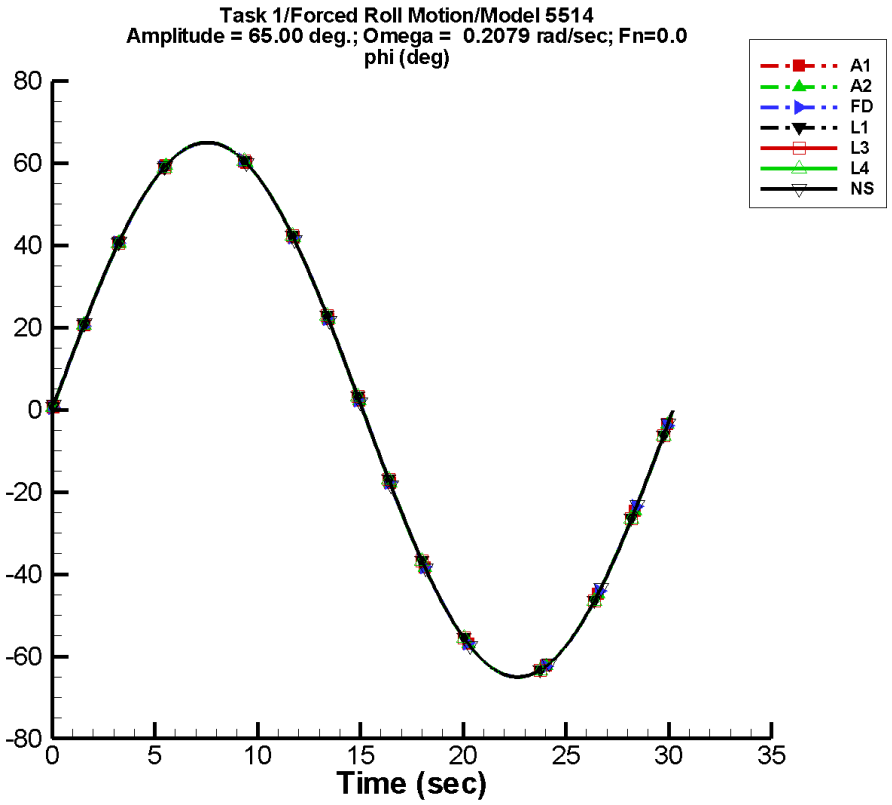
Figure D–4. Time history of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–7. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.89E-05 | 45.0 | 0 | 4.73E-05 | -21 |
| A2 | -3.89E-05 | 45.0 | 0 | 4.73E-05 | -21 |
| FD | -4.26E-09 | 45.0 | 0 | 4.55E-06 | 72 |
| L1 | 3.14E-05 | 45.0 | 0 | 4.39E-06 | -96 |
| L3 | 3.14E-05 | 45.0 | 0 | 4.39E-06 | -96 |
| L4 | 3.14E-05 | 45.0 | 0 | 4.39E-06 | -96 |
| NF | — | — | — | — | — |
| NS | -3.41E-06 | 45.0 | 0 | 1.26E-06 | 25 |

Table D–8. Minimum and maximum of of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -45.0 | 45.0 | -45.0 | 45.0 |
| A2 | -45.0 | 45.0 | -45.0 | 45.0 |
| FD | -45.0 | 45.0 | -44.9 | 44.9 |
| L1 | -45.0 | 45.0 | -45.0 | 45.0 |
| L3 | -45.0 | 45.0 | -45.0 | 45.0 |
| L4 | -45.0 | 45.0 | -45.0 | 45.0 |
| NF | — | — | — | — |
| NS | -45.0 | 45.0 | -44.9 | 44.9 |




Data identically zero, insufficient, or not available from NFA.

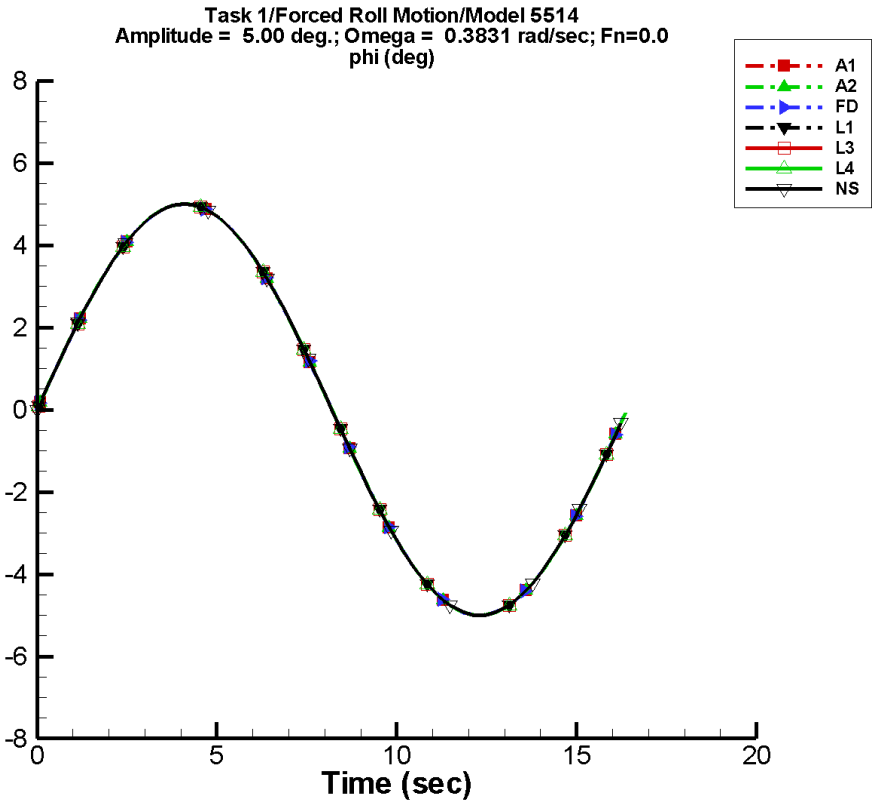
Figure D–5. Time history of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–9. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.87E-05 | 65.0 | 0 | 7.22E-05 | -18 |
| A2 | -4.87E-05 | 65.0 | 0 | 7.22E-05 | -18 |
| FD | -8.71E-06 | 65.0 | 0 | 1.27E-05 | 56 |
| L1 | -1.53E-04 | 65.0 | 0 | 7.15E-06 | -8 |
| L3 | -1.53E-04 | 65.0 | 0 | 7.15E-06 | -8 |
| L4 | -1.53E-04 | 65.0 | 0 | 7.15E-06 | -8 |
| NF | — | — | — | — | — |
| NS | 2.47E-06 | 65.0 | 0 | 1.26E-05 | 117 |

Table D–10. Minimum and maximum of of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -65.0 | 65.0 | -64.9 | 65.0 |
| A2 | -65.0 | 65.0 | -64.9 | 65.0 |
| FD | -65.0 | 65.0 | -64.9 | 64.9 |
| L1 | -65.0 | 65.0 | -65.0 | 65.0 |
| L3 | -65.0 | 65.0 | -65.0 | 65.0 |
| L4 | -65.0 | 65.0 | -65.0 | 65.0 |
| NF | — | — | — | — |
| NS | -65.0 | 65.0 | -64.9 | 64.9 |




Data identically zero, insufficient, or not available from NFA.

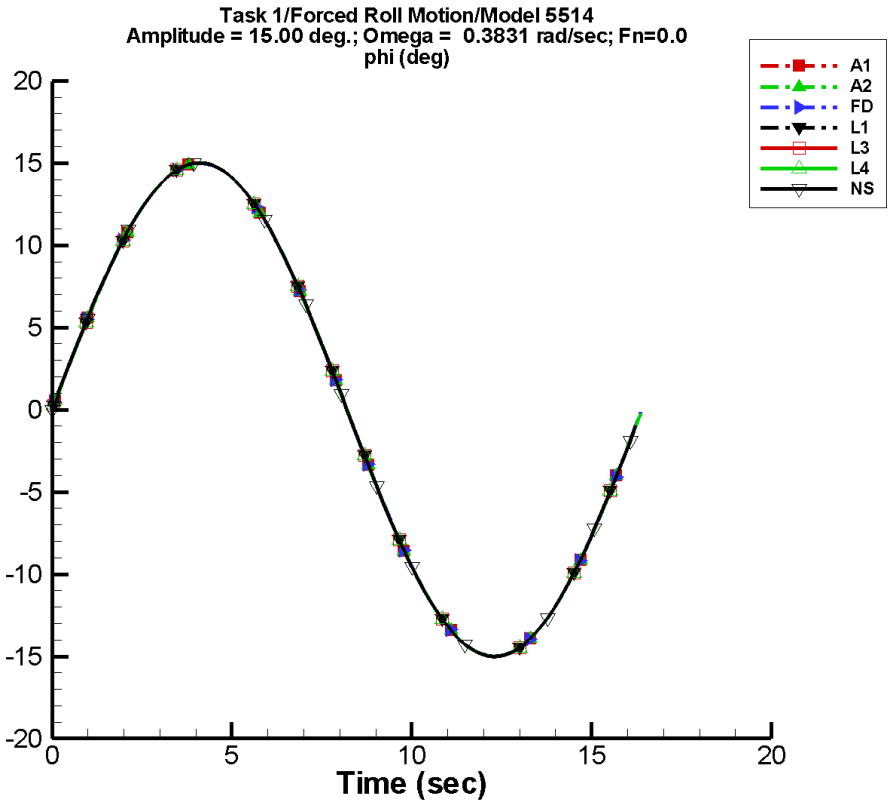
Figure D–6. Time history of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–11. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.11E-08 | 5.00 | 0 | 4.98E-07 | -131 |
| A2 | -6.11E-08 | 5.00 | 0 | 4.98E-07 | -131 |
| FD | 1.50E-07 | 5.00 | 0 | 6.30E-07 | 98 |
| L1 | 2.99E-05 | 5.00 | 0 | 1.29E-06 | 90 |
| L3 | 2.99E-05 | 5.00 | 0 | 1.29E-06 | 90 |
| L4 | 2.99E-05 | 5.00 | 0 | 1.29E-06 | 90 |
| NF | — | — | — | — | — |
| NS | 3.61E-08 | 5.00 | 0 | 5.35E-07 | -26 |

Table D–12. Minimum and maximum of of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -5.00 | 5.00 | -4.98 | 5.02 |
| A2 | -5.00 | 5.00 | -4.98 | 5.02 |
| FD | -5.00 | 5.00 | -4.98 | 4.98 |
| L1 | -5.00 | 5.00 | -4.99 | 4.99 |
| L3 | -5.00 | 5.00 | -4.99 | 4.99 |
| L4 | -5.00 | 5.00 | -4.99 | 4.99 |
| NF | — | — | — | — |
| NS | -5.00 | 5.00 | -4.95 | 4.95 |




Data identically zero, insufficient, or not available from NFA.

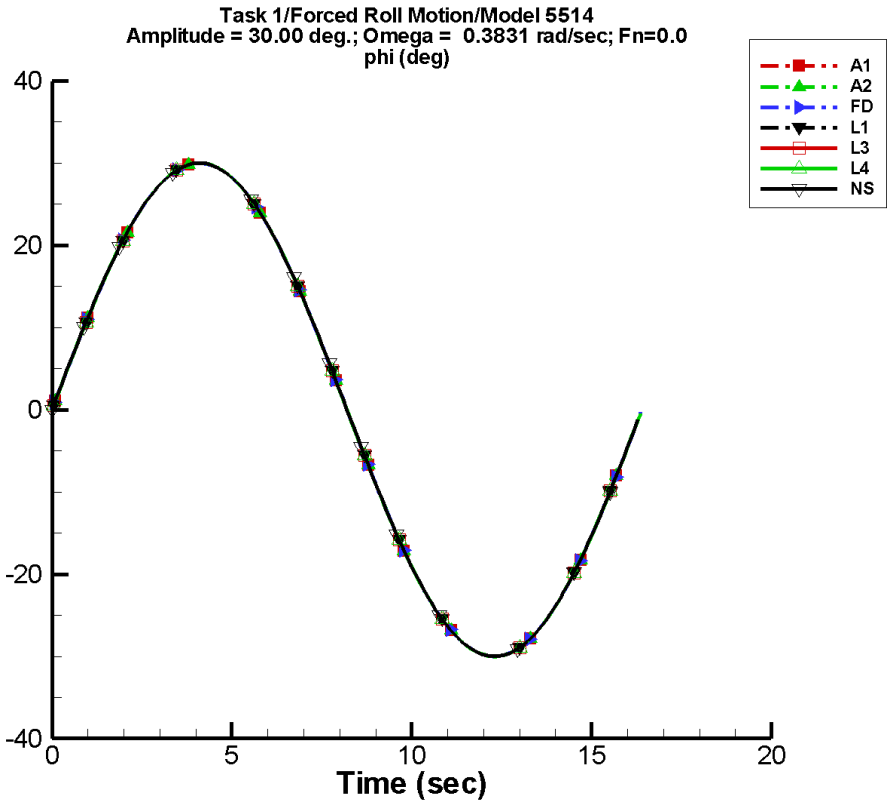
Figure D–7. Time history of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–13. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.18E-06 | 15.0 | 0 | 9.67E-07 | 124 |
| A2 | 1.18E-06 | 15.0 | 0 | 9.67E-07 | 124 |
| FD | 2.43E-06 | 15.0 | 0 | 4.86E-07 | -20 |
| L1 | 1.39E-04 | 15.0 | 0 | 1.17E-07 | 5 |
| L3 | 1.39E-04 | 15.0 | 0 | 1.17E-07 | 5 |
| L4 | 1.39E-04 | 15.0 | 0 | 1.17E-07 | 5 |
| NF | — | — | — | — | — |
| NS | 5.14E-07 | 15.0 | 0 | 1.79E-06 | -13 |

Table D–14. Minimum and maximum of of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -15.0 | 15.0 | -14.9 | 15.0 |
| A2 | -15.0 | 15.0 | -14.9 | 15.0 |
| FD | -15.0 | 15.0 | -14.9 | 14.9 |
| L1 | -15.0 | 15.0 | -15.0 | 15.0 |
| L3 | -15.0 | 15.0 | -15.0 | 15.0 |
| L4 | -15.0 | 15.0 | -15.0 | 15.0 |
| NF | — | — | — | — |
| NS | -15.0 | 15.0 | -14.9 | 14.9 |




Data identically zero, insufficient, or not available from NFA.

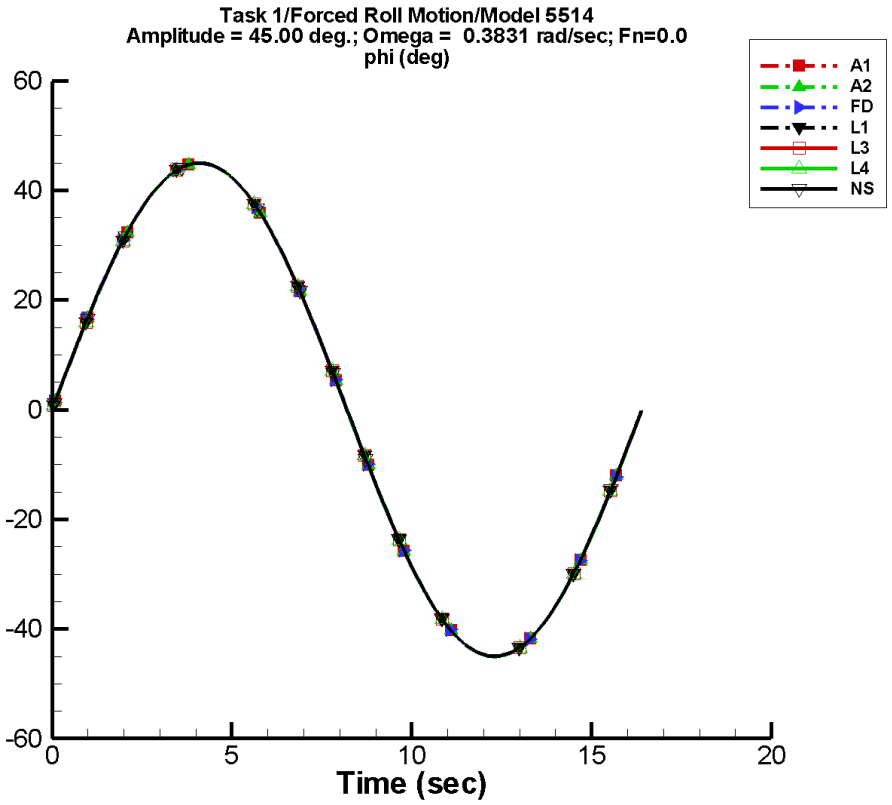
Figure D–8. Time history of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–15. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.43E-06 | 30.0 | 0 | 2.79E-06 | 99 |
| A2 | 1.43E-06 | 30.0 | 0 | 2.79E-06 | 99 |
| FD | 4.46E-06 | 30.0 | 0 | 1.45E-06 | 167 |
| L1 | 2.76E-04 | 30.0 | 0 | 5.99E-06 | 88 |
| L3 | 2.76E-04 | 30.0 | 0 | 5.99E-06 | 88 |
| L4 | 2.76E-04 | 30.0 | 0 | 5.99E-06 | 88 |
| NF | — | — | — | — | — |
| NS | -1.69E-07 | 30.0 | 0 | 7.75E-07 | -63 |

Table D–16. Minimum and maximum of of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -30.0 | 30.0 | -29.9 | 30.1 |
| A2 | -30.0 | 30.0 | -29.9 | 30.1 |
| FD | -30.0 | 30.0 | -29.9 | 29.9 |
| L1 | -30.0 | 30.0 | -30.0 | 30.0 |
| L3 | -30.0 | 30.0 | -30.0 | 30.0 |
| L4 | -30.0 | 30.0 | -30.0 | 30.0 |
| NF | — | — | — | — |
| NS | -30.0 | 30.0 | -29.9 | 29.9 |




Data identically zero, insufficient, or not available from NFA.

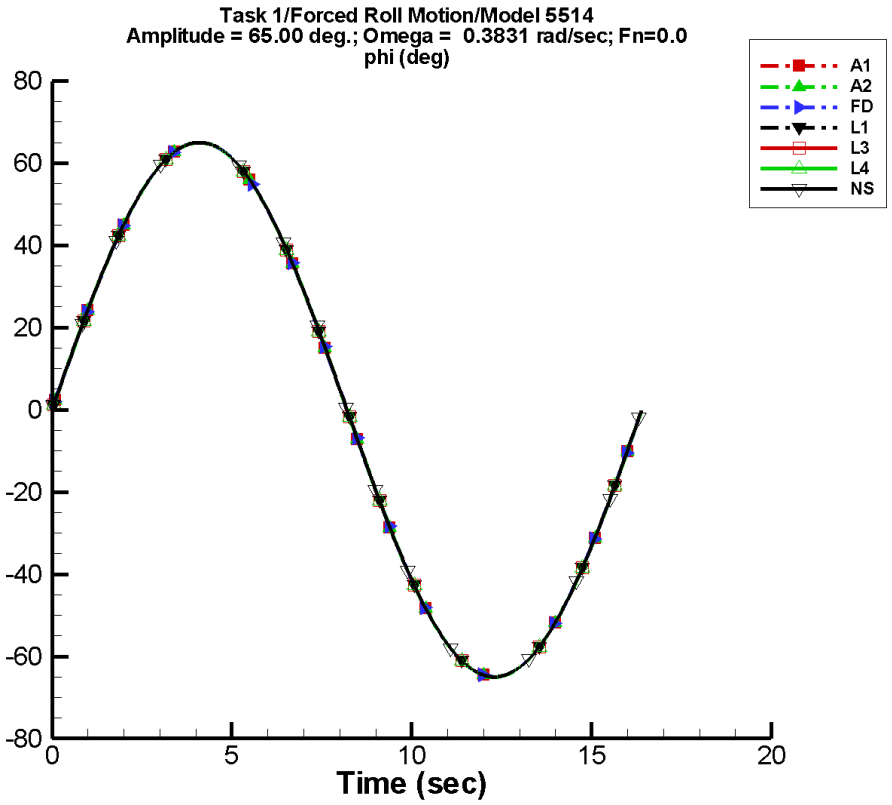
Figure D–9. Time history of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–17. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.38E-06 | 45.0 | 0 | 5.87E-06 | -49 |
| A2 | -3.38E-06 | 45.0 | 0 | 5.87E-06 | -49 |
| FD | 3.83E-06 | 45.0 | 0 | 6.29E-06 | 150 |
| L1 | 1.74E-04 | 45.0 | 0 | 4.96E-06 | 91 |
| L3 | 1.74E-04 | 45.0 | 0 | 4.96E-06 | 91 |
| L4 | 1.74E-04 | 45.0 | 0 | 4.96E-06 | 91 |
| NF | — | — | — | — | — |
| NS | -4.20E-06 | 45.0 | 0 | 5.80E-06 | 35 |

Table D–18. Minimum and maximum of of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -45.0 | 45.0 | -44.8 | 45.1 |
| A2 | -45.0 | 45.0 | -44.8 | 45.1 |
| FD | -45.0 | 45.0 | -44.8 | 44.8 |
| L1 | -45.0 | 45.0 | -44.9 | 44.9 |
| L3 | -45.0 | 45.0 | -44.9 | 44.9 |
| L4 | -45.0 | 45.0 | -44.9 | 44.9 |
| NF | — | — | — | — |
| NS | -45.0 | 45.0 | -44.9 | 44.9 |




Data identically zero, insufficient, or not available from NFA.

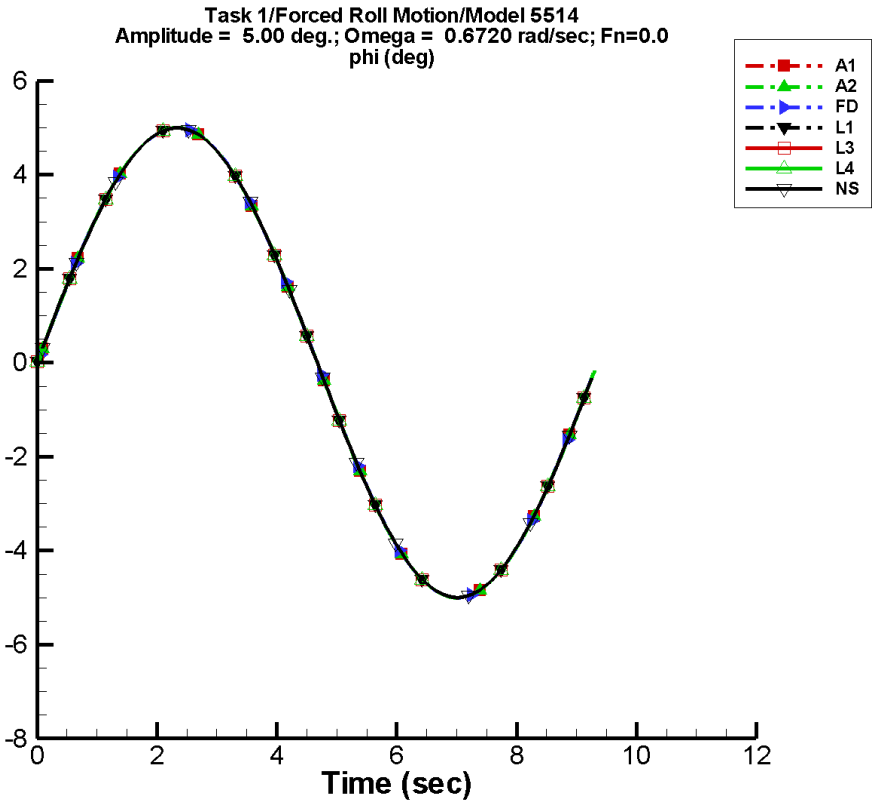
Figure D–10. Time history of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–19. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.03E-06 | 65.0 | 0 | 5.40E-06 | -51 |
| A2 | 9.03E-06 | 65.0 | 0 | 5.40E-06 | -51 |
| FD | 9.18E-06 | 65.0 | 0 | 9.68E-06 | 98 |
| L1 | 2.76E-04 | 65.0 | 0 | 7.10E-06 | 130 |
| L3 | 2.76E-04 | 65.0 | 0 | 7.10E-06 | 130 |
| L4 | 2.76E-04 | 65.0 | 0 | 7.10E-06 | 130 |
| NF | — | — | — | — | — |
| NS | -5.91E-06 | 65.0 | 0 | 1.20E-06 | -156 |

Table D–20. Minimum and maximum of of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -65.0 | 65.0 | -64.8 | 65.2 |
| A2 | -65.0 | 65.0 | -64.8 | 65.2 |
| FD | -65.0 | 65.0 | -64.8 | 64.8 |
| L1 | -65.0 | 65.0 | -64.9 | 64.9 |
| L3 | -65.0 | 65.0 | -64.9 | 64.9 |
| L4 | -65.0 | 65.0 | -64.9 | 64.9 |
| NF | — | — | — | — |
| NS | -65.0 | 65.0 | -65.0 | 65.0 |




Data identically zero, insufficient, or not available from NFA.

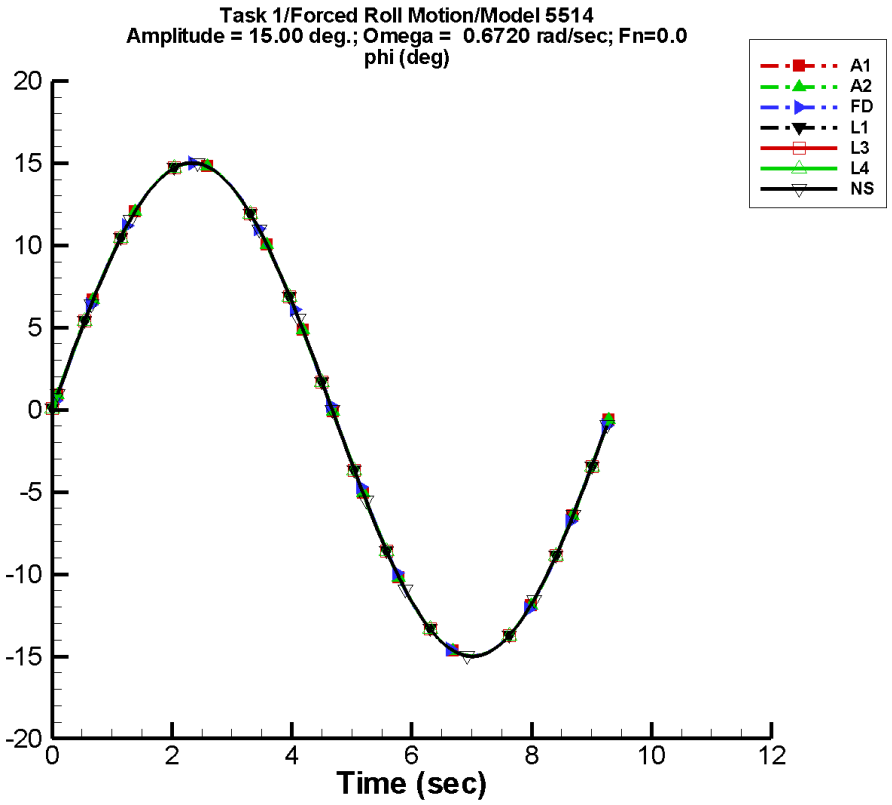
Figure D–11. Time history of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–21. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.92E-06 | 5.00 | 0 | 8.21E-06 | -17 |
| A2 | -4.92E-06 | 5.00 | 0 | 8.21E-06 | -17 |
| FD | -6.65E-06 | 5.00 | 0 | 1.07E-05 | -143 |
| L1 | 9.21E-05 | 5.00 | 0 | 5.79E-06 | 139 |
| L3 | 9.21E-05 | 5.00 | 0 | 5.79E-06 | 139 |
| L4 | 9.21E-05 | 5.00 | 0 | 5.79E-06 | 139 |
| NF | — | — | — | — | — |
| NS | -2.79E-07 | 5.00 | 0 | 5.18E-07 | 48 |

Table D–22. Minimum and maximum of of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -5.00 | 5.00 | -4.94 | 4.94 |
| A2 | -5.00 | 5.00 | -4.94 | 4.94 |
| FD | -5.00 | 5.00 | -4.97 | 4.94 |
| L1 | -5.00 | 5.00 | -4.98 | 4.98 |
| L3 | -5.00 | 5.00 | -4.98 | 4.98 |
| L4 | -5.00 | 5.00 | -4.98 | 4.98 |
| NF | — | — | — | — |
| NS | -5.00 | 5.00 | -4.95 | 4.95 |




Data identically zero, insufficient, or not available from NFA.

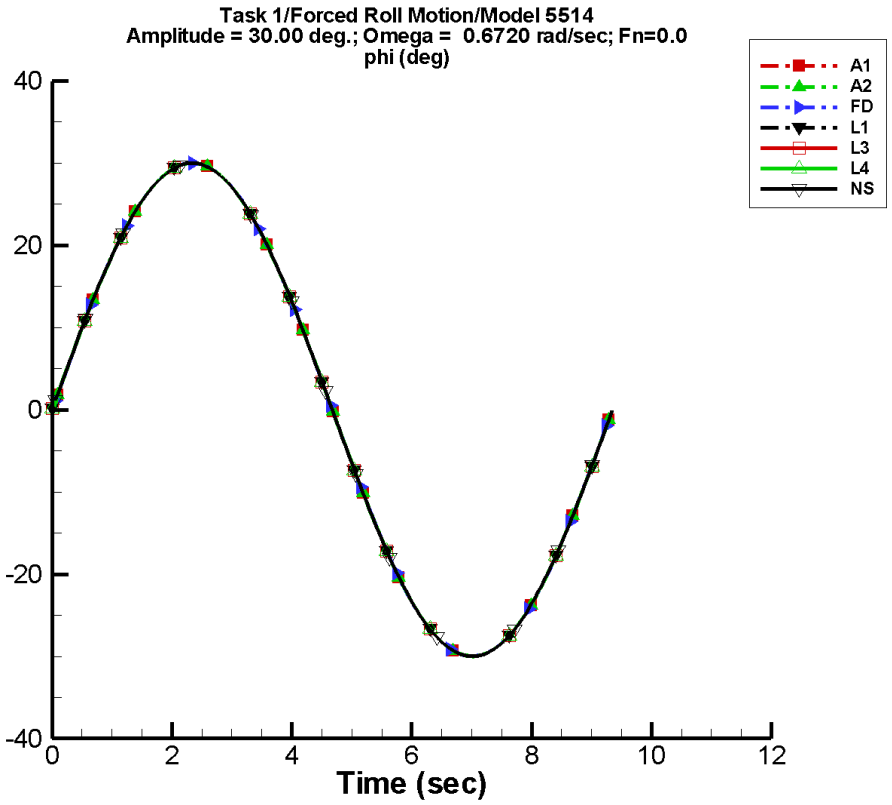
Figure D–12. Time history of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–23. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.51E-05 | 15.0 | 0 | 2.53E-05 | -16 |
| A2 | -1.51E-05 | 15.0 | 0 | 2.53E-05 | -16 |
| FD | -1.95E-05 | 15.0 | 0 | 3.21E-05 | -142 |
| L1 | 2.88E-04 | 15.0 | 0 | 2.19E-05 | 126 |
| L3 | 2.88E-04 | 15.0 | 0 | 2.19E-05 | 126 |
| L4 | 2.88E-04 | 15.0 | 0 | 2.19E-05 | 126 |
| NF | — | — | — | — | — |
| NS | -8.78E-07 | 15.0 | 0 | 1.34E-06 | 73 |

Table D–24. Minimum and maximum of of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -15.0 | 15.0 | -14.8 | 14.8 |
| A2 | -15.0 | 15.0 | -14.8 | 14.8 |
| FD | -15.0 | 15.0 | -14.9 | 14.8 |
| L1 | -15.0 | 15.0 | -14.9 | 14.9 |
| L3 | -15.0 | 15.0 | -14.9 | 14.9 |
| L4 | -15.0 | 15.0 | -14.9 | 14.9 |
| NF | — | — | — | — |
| NS | -15.0 | 15.0 | -14.9 | 14.9 |




Data identically zero, insufficient, or not available from NFA.

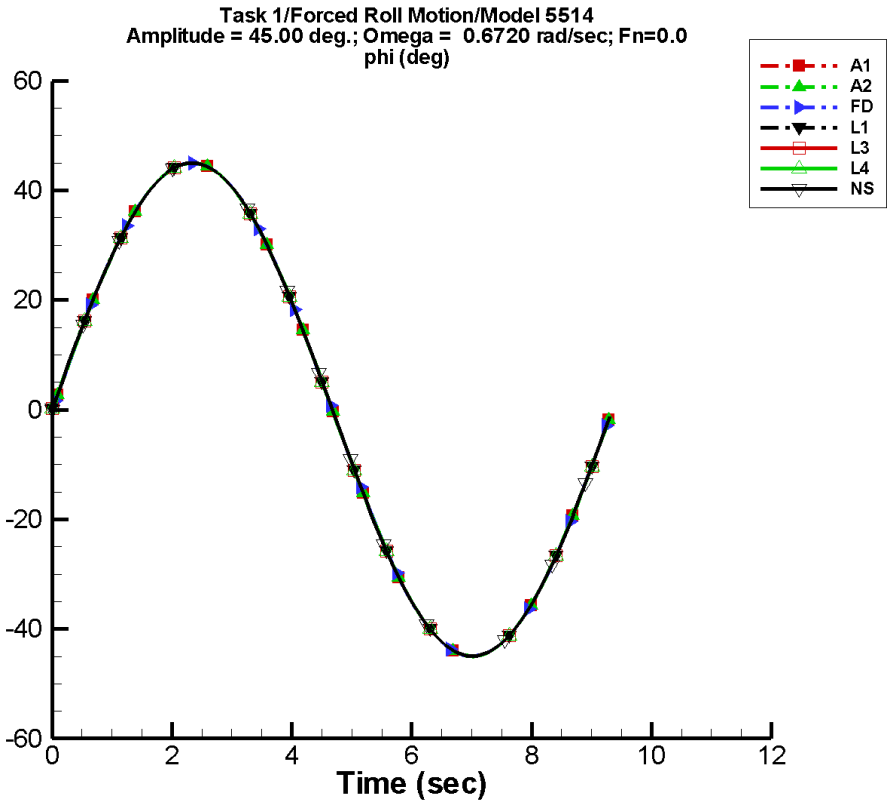
Figure D–13. Time history of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–25. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.94E-05 | 30.0 | 0 | 5.17E-05 | -18 |
| A2 | -2.94E-05 | 30.0 | 0 | 5.17E-05 | -18 |
| FD | -3.96E-05 | 30.0 | 0 | 6.41E-05 | -142 |
| L1 | 5.87E-04 | 30.0 | 0 | 3.90E-05 | 137 |
| L3 | 5.87E-04 | 30.0 | 0 | 3.90E-05 | 137 |
| L4 | 5.87E-04 | 30.0 | 0 | 3.90E-05 | 137 |
| NF | — | — | — | — | — |
| NS | 1.94E-06 | 30.0 | 0 | 1.03E-05 | 18 |

Table D–26. Minimum and maximum of of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -30.0 | 30.0 | -29.7 | 29.6 |
| A2 | -30.0 | 30.0 | -29.7 | 29.6 |
| FD | -30.0 | 30.0 | -29.8 | 29.7 |
| L1 | -30.0 | 30.0 | -29.9 | 29.9 |
| L3 | -30.0 | 30.0 | -29.9 | 29.9 |
| L4 | -30.0 | 30.0 | -29.9 | 29.9 |
| NF | — | — | — | — |
| NS | -30.0 | 30.0 | -29.9 | 29.9 |




Data identically zero, insufficient, or not available from NFA.

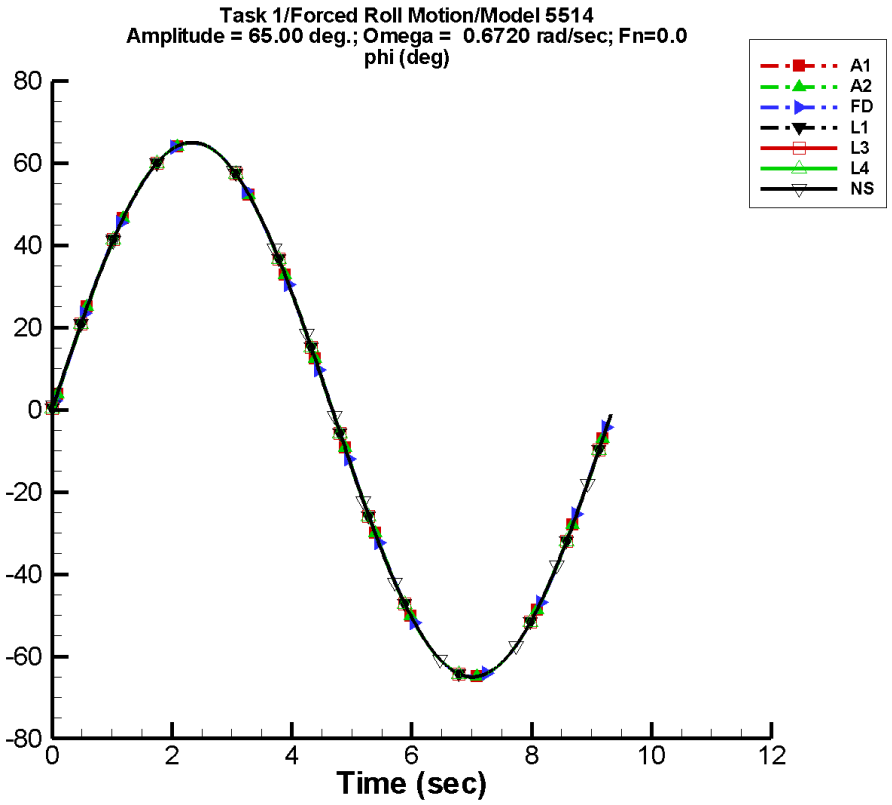
Figure D–14. Time history of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–27. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.72E-05 | 45.0 | 0 | 7.50E-05 | -17 |
| A2 | -4.72E-05 | 45.0 | 0 | 7.50E-05 | -17 |
| FD | -5.69E-05 | 45.0 | 0 | 9.63E-05 | -142 |
| L1 | 8.14E-04 | 45.0 | 0 | 5.39E-05 | 143 |
| L3 | 8.14E-04 | 45.0 | 0 | 5.39E-05 | 143 |
| L4 | 8.14E-04 | 45.0 | 0 | 5.39E-05 | 143 |
| NF | — | — | — | — | — |
| NS | 5.33E-07 | 45.0 | 0 | 4.98E-06 | 106 |

Table D–28. Minimum and maximum of of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -45.0 | 45.0 | -44.5 | 44.5 |
| A2 | -45.0 | 45.0 | -44.5 | 44.5 |
| FD | -45.0 | 45.0 | -44.8 | 44.5 |
| L1 | -45.0 | 45.0 | -44.8 | 44.8 |
| L3 | -45.0 | 45.0 | -44.8 | 44.8 |
| L4 | -45.0 | 45.0 | -44.8 | 44.8 |
| NF | — | — | — | — |
| NS | -45.0 | 45.0 | -44.9 | 44.9 |




Data identically zero, insufficient, or not available from NFA.

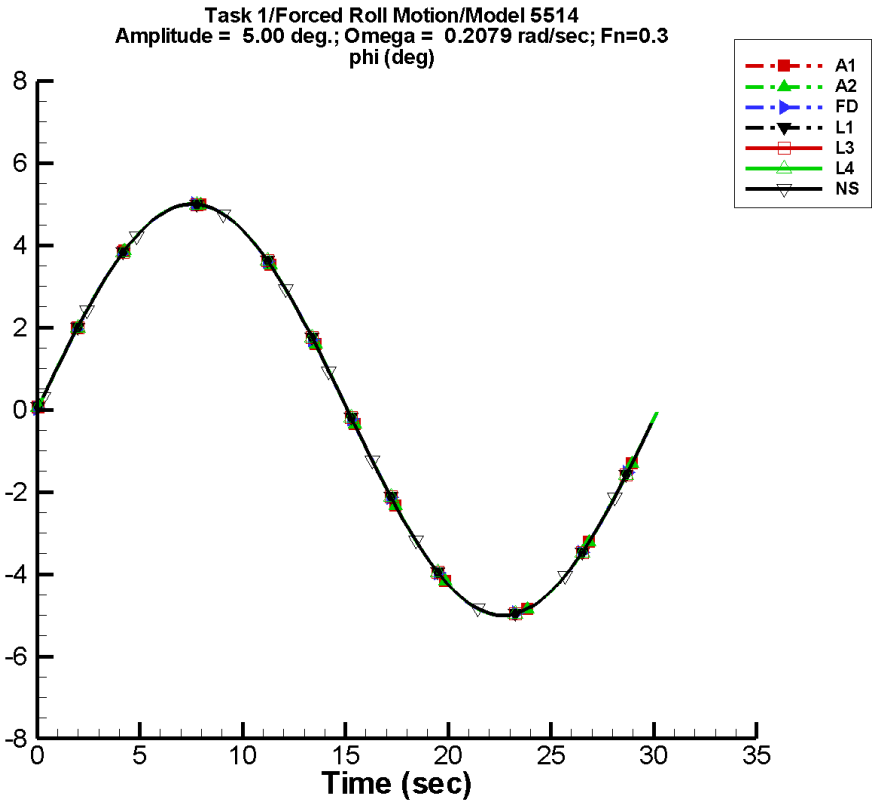
Figure D–15. Time history of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–29. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.81E-05 | 65.0 | 0 | 1.09E-04 | -17 |
| A2 | -6.81E-05 | 65.0 | 0 | 1.09E-04 | -17 |
| FD | -8.29E-05 | 65.0 | 0 | 1.37E-04 | -144 |
| L1 | 1.24E-03 | 65.0 | 0 | 8.25E-05 | 139 |
| L3 | 1.24E-03 | 65.0 | 0 | 8.25E-05 | 139 |
| L4 | 1.24E-03 | 65.0 | 0 | 8.25E-05 | 139 |
| NF | — | — | — | — | — |
| NS | -4.64E-06 | 65.0 | 0 | 8.83E-06 | -157 |

Table D–30. Minimum and maximum of of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -65.0 | 65.0 | -64.2 | 64.2 |
| A2 | -65.0 | 65.0 | -64.2 | 64.2 |
| FD | -65.0 | 65.0 | -64.7 | 64.3 |
| L1 | -65.0 | 65.0 | -64.7 | 64.7 |
| L3 | -65.0 | 65.0 | -64.7 | 64.7 |
| L4 | -65.0 | 65.0 | -64.7 | 64.7 |
| NF | — | — | — | — |
| NS | -65.0 | 65.0 | -65.0 | 65.0 |




Data identically zero, insufficient, or not available from NFA.

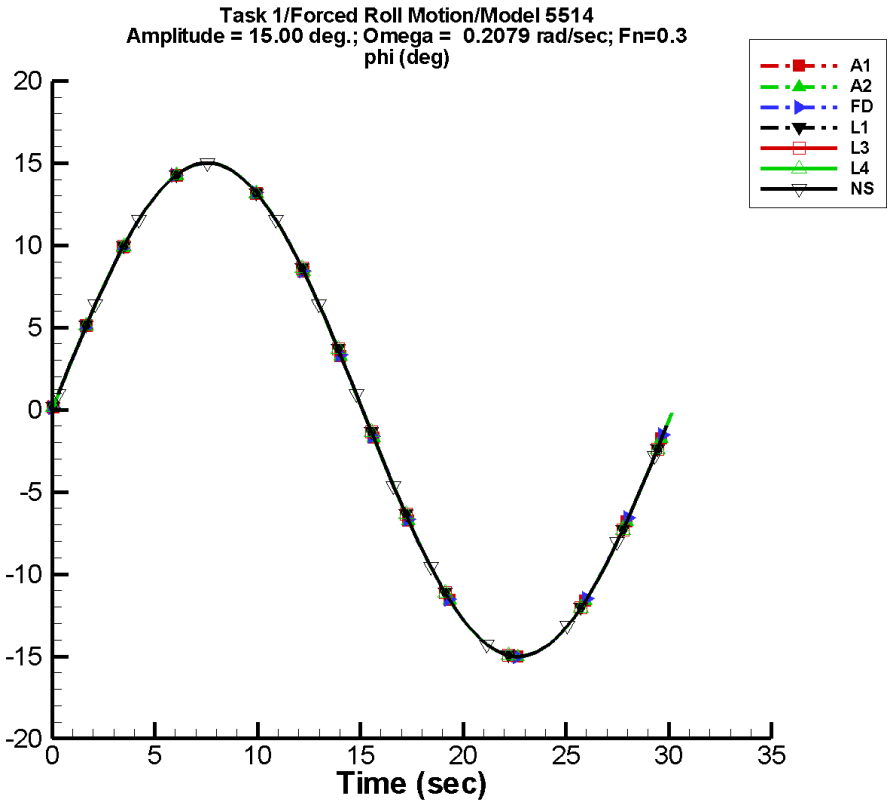
Figure D–16. Time history of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–31. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.69E-06 | 5.00 | 0 | 5.18E-06 | -21 |
| A2 | -3.69E-06 | 5.00 | 0 | 5.18E-06 | -21 |
| FD | 1.60E-07 | 5.00 | 0 | 6.54E-07 | 31 |
| L1 | -5.24E-06 | 5.00 | 0 | 8.69E-07 | -32 |
| L3 | -5.24E-06 | 5.00 | 0 | 8.69E-07 | -32 |
| L4 | -5.24E-06 | 5.00 | 0 | 8.69E-07 | -32 |
| NF | — | — | — | — | — |
| NS | 4.90E-07 | 5.00 | 0 | 5.45E-07 | 52 |

Table D–32. Minimum and maximum of of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -5.00 | 5.00 | -5.00 | 5.00 |
| A2 | -5.00 | 5.00 | -5.00 | 5.00 |
| FD | -5.00 | 5.00 | -4.99 | 4.99 |
| L1 | -5.00 | 5.00 | -5.00 | 5.00 |
| L3 | -5.00 | 5.00 | -5.00 | 5.00 |
| L4 | -5.00 | 5.00 | -5.00 | 5.00 |
| NF | — | — | — | — |
| NS | -5.00 | 5.00 | -4.95 | 4.95 |




Data identically zero, insufficient, or not available from NFA.

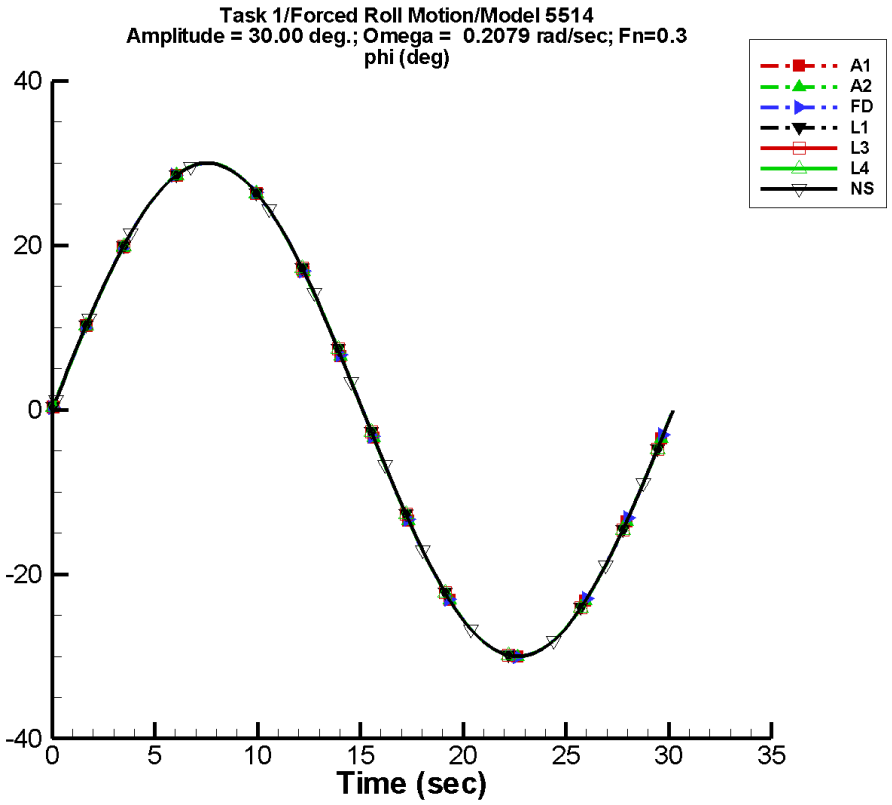
Figure D–17. Time history of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–33. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.17E-05 | 15.0 | 0 | 1.42E-05 | -20 |
| A2 | -1.17E-05 | 15.0 | 0 | 1.42E-05 | -20 |
| FD | -3.88E-07 | 15.0 | 0 | 2.68E-06 | 35 |
| L1 | 6.20E-06 | 15.0 | 0 | 4.39E-06 | -49 |
| L3 | 6.20E-06 | 15.0 | 0 | 4.39E-06 | -49 |
| L4 | 6.20E-06 | 15.0 | 0 | 4.39E-06 | -49 |
| NF | — | — | — | — | — |
| NS | 1.98E-06 | 15.0 | 0 | 9.86E-07 | -14 |

Table D–34. Minimum and maximum of of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -15.0 | 15.0 | -15.0 | 15.0 |
| A2 | -15.0 | 15.0 | -15.0 | 15.0 |
| FD | -15.0 | 15.0 | -15.0 | 15.0 |
| L1 | -15.0 | 15.0 | -15.0 | 15.0 |
| L3 | -15.0 | 15.0 | -15.0 | 15.0 |
| L4 | -15.0 | 15.0 | -15.0 | 15.0 |
| NF | — | — | — | — |
| NS | -15.0 | 15.0 | -14.9 | 14.9 |




Data identically zero, insufficient, or not available from NFA.

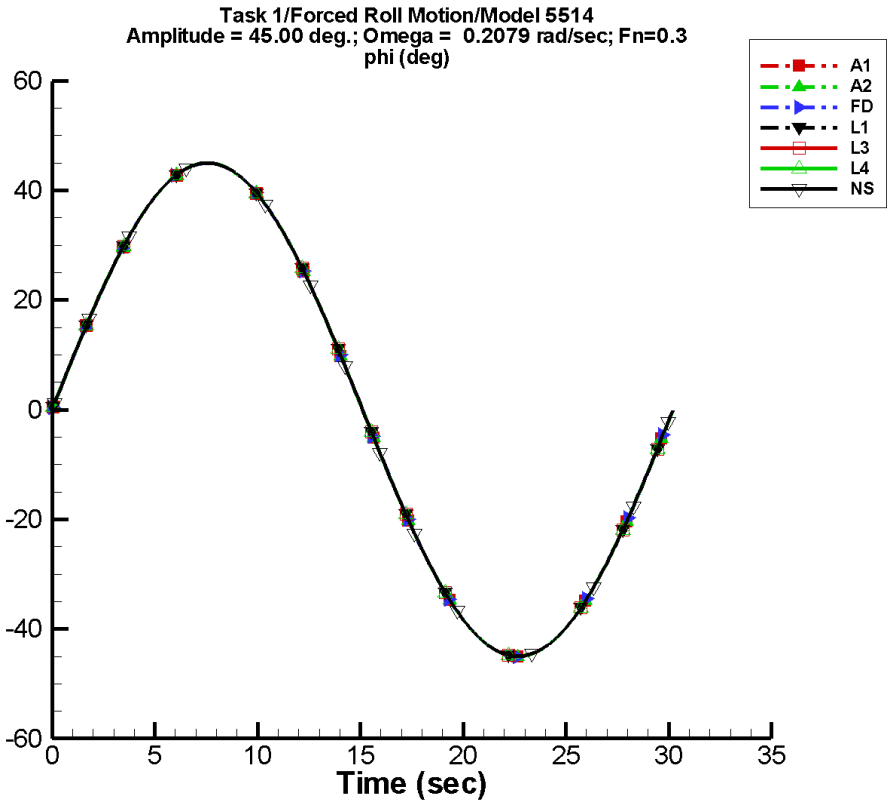
Figure D–18. Time history of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–35. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.30E-05 | 30.0 | 0 | 2.74E-05 | -18 |
| A2 | -2.30E-05 | 30.0 | 0 | 2.74E-05 | -18 |
| FD | -2.43E-06 | 30.0 | 0 | 4.51E-06 | 64 |
| L1 | 3.60E-06 | 30.0 | 0 | 6.23E-06 | 2 |
| L3 | 3.60E-06 | 30.0 | 0 | 6.23E-06 | 2 |
| L4 | 3.60E-06 | 30.0 | 0 | 6.23E-06 | 2 |
| NF | — | — | — | — | — |
| NS | 1.84E-06 | 30.0 | 0 | 2.16E-06 | 133 |

Table D–36. Minimum and maximum of of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -30.0 | 30.0 | -30.0 | 30.0 |
| A2 | -30.0 | 30.0 | -30.0 | 30.0 |
| FD | -30.0 | 30.0 | -30.0 | 30.0 |
| L1 | -30.0 | 30.0 | -30.0 | 30.0 |
| L3 | -30.0 | 30.0 | -30.0 | 30.0 |
| L4 | -30.0 | 30.0 | -30.0 | 30.0 |
| NF | — | — | — | — |
| NS | -30.0 | 30.0 | -29.9 | 29.9 |




Data identically zero, insufficient, or not available from NFA.

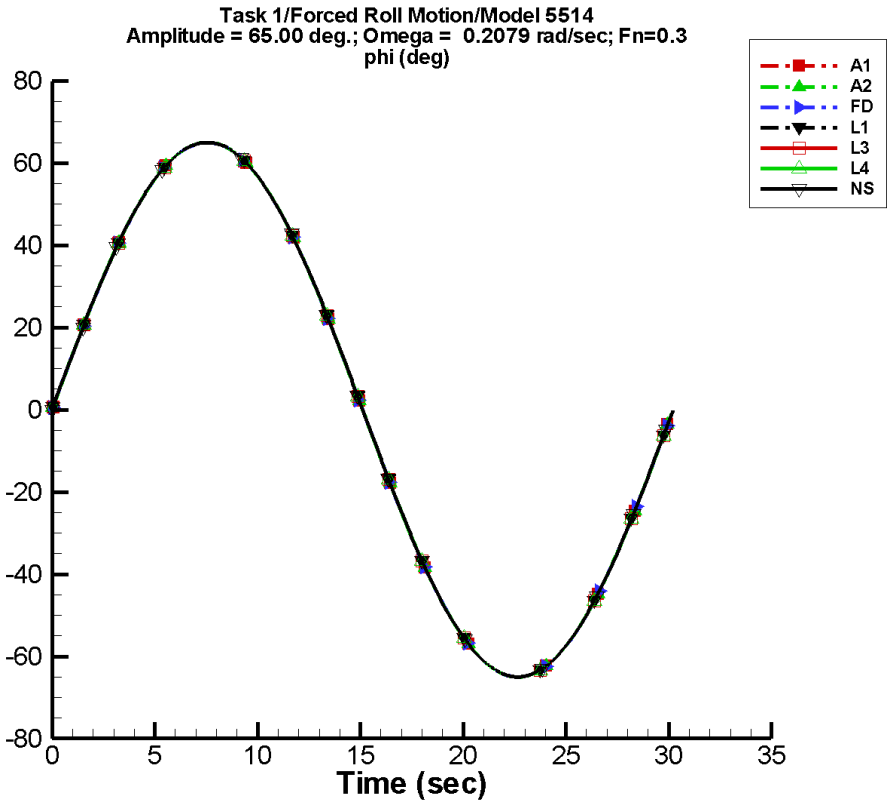
Figure D–19. Time history of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–37. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.89E-05 | 45.0 | 0 | 4.73E-05 | -21 |
| A2 | -3.89E-05 | 45.0 | 0 | 4.73E-05 | -21 |
| FD | -4.26E-09 | 45.0 | 0 | 4.55E-06 | 72 |
| L1 | 3.14E-05 | 45.0 | 0 | 4.39E-06 | -96 |
| L3 | 3.14E-05 | 45.0 | 0 | 4.39E-06 | -96 |
| L4 | 3.14E-05 | 45.0 | 0 | 4.39E-06 | -96 |
| NF | — | — | — | — | — |
| NS | -3.41E-06 | 45.0 | 0 | 1.26E-06 | 25 |

Table D–38. Minimum and maximum of of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -45.0 | 45.0 | -45.0 | 45.0 |
| A2 | -45.0 | 45.0 | -45.0 | 45.0 |
| FD | -45.0 | 45.0 | -44.9 | 44.9 |
| L1 | -45.0 | 45.0 | -45.0 | 45.0 |
| L3 | -45.0 | 45.0 | -45.0 | 45.0 |
| L4 | -45.0 | 45.0 | -45.0 | 45.0 |
| NF | — | — | — | — |
| NS | -45.0 | 45.0 | -44.9 | 44.9 |




Data identically zero, insufficient, or not available from NFA.

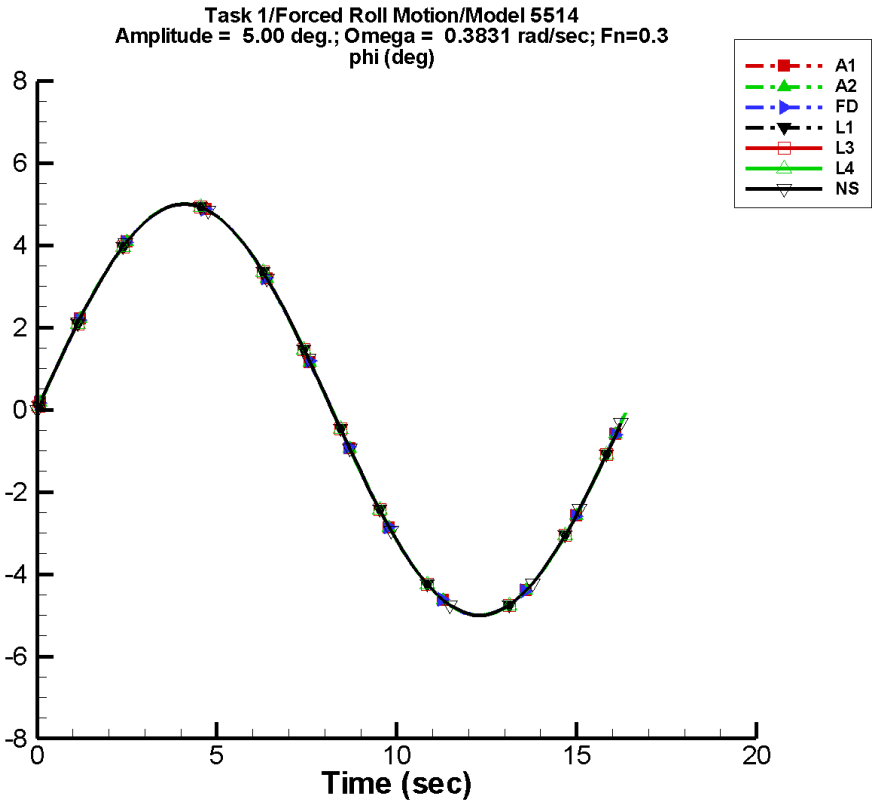
Figure D–20. Time history of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–39. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.87E-05 | 65.0 | 0 | 7.22E-05 | -18 |
| A2 | -4.87E-05 | 65.0 | 0 | 7.22E-05 | -18 |
| FD | -8.71E-06 | 65.0 | 0 | 1.27E-05 | 56 |
| L1 | -1.53E-04 | 65.0 | 0 | 7.15E-06 | -8 |
| L3 | -1.53E-04 | 65.0 | 0 | 7.15E-06 | -8 |
| L4 | -1.53E-04 | 65.0 | 0 | 7.15E-06 | -8 |
| NF | — | — | — | — | — |
| NS | 2.87E-06 | 65.0 | 0 | 1.46E-06 | 65 |

Table D–40. Minimum and maximum of of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -65.0 | 65.0 | -64.9 | 65.0 |
| A2 | -65.0 | 65.0 | -64.9 | 65.0 |
| FD | -65.0 | 65.0 | -64.9 | 64.9 |
| L1 | -65.0 | 65.0 | -65.0 | 65.0 |
| L3 | -65.0 | 65.0 | -65.0 | 65.0 |
| L4 | -65.0 | 65.0 | -65.0 | 65.0 |
| NF | — | — | — | — |
| NS | -65.0 | 65.0 | -65.0 | 65.0 |




Data identically zero, insufficient, or not available from NFA.

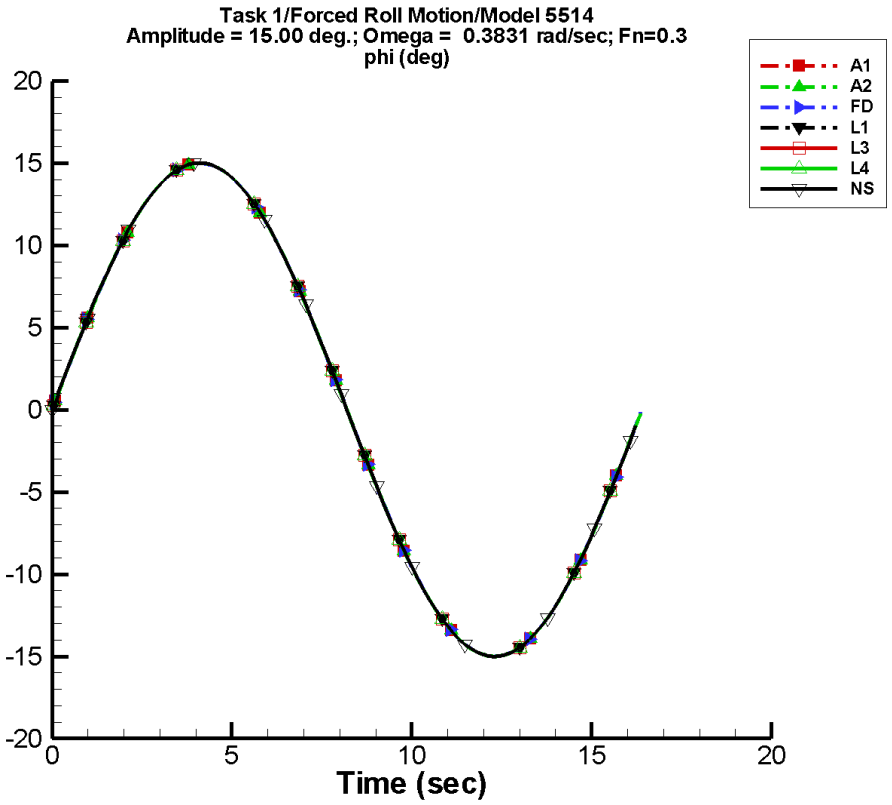
Figure D–21. Time history of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–41. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.11E-08 | 5.00 | 0 | 4.98E-07 | -131 |
| A2 | -6.11E-08 | 5.00 | 0 | 4.98E-07 | -131 |
| FD | 1.50E-07 | 5.00 | 0 | 6.30E-07 | 98 |
| L1 | 2.99E-05 | 5.00 | 0 | 1.29E-06 | 90 |
| L3 | 2.99E-05 | 5.00 | 0 | 1.29E-06 | 90 |
| L4 | 2.99E-05 | 5.00 | 0 | 1.29E-06 | 90 |
| NF | — | — | — | — | — |
| NS | 3.61E-08 | 5.00 | 0 | 5.35E-07 | -26 |

Table D–42. Minimum and maximum of of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -5.00 | 5.00 | -4.98 | 5.02 |
| A2 | -5.00 | 5.00 | -4.98 | 5.02 |
| FD | -5.00 | 5.00 | -4.98 | 4.98 |
| L1 | -5.00 | 5.00 | -4.99 | 4.99 |
| L3 | -5.00 | 5.00 | -4.99 | 4.99 |
| L4 | -5.00 | 5.00 | -4.99 | 4.99 |
| NF | — | — | — | — |
| NS | -5.00 | 5.00 | -4.95 | 4.95 |




Data identically zero, insufficient, or not available from NFA.

Figure D–22. Time history of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–43. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.18E-06 | 15.0 | 0 | 9.67E-07 | 124 |
| A2 | 1.18E-06 | 15.0 | 0 | 9.67E-07 | 124 |
| FD | 2.43E-06 | 15.0 | 0 | 4.86E-07 | -20 |
| L1 | 1.39E-04 | 15.0 | 0 | 1.17E-07 | 5 |
| L3 | 1.39E-04 | 15.0 | 0 | 1.17E-07 | 5 |
| L4 | 1.39E-04 | 15.0 | 0 | 1.17E-07 | 5 |
| NF | — | — | — | — | — |
| NS | 5.14E-07 | 15.0 | 0 | 1.79E-06 | -13 |

Table D–44. Minimum and maximum of of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -15.0 | 15.0 | -14.9 | 15.0 |
| A2 | -15.0 | 15.0 | -14.9 | 15.0 |
| FD | -15.0 | 15.0 | -14.9 | 14.9 |
| L1 | -15.0 | 15.0 | -15.0 | 15.0 |
| L3 | -15.0 | 15.0 | -15.0 | 15.0 |
| L4 | -15.0 | 15.0 | -15.0 | 15.0 |
| NF | — | — | — | — |
| NS | -15.0 | 15.0 | -14.9 | 14.9 |

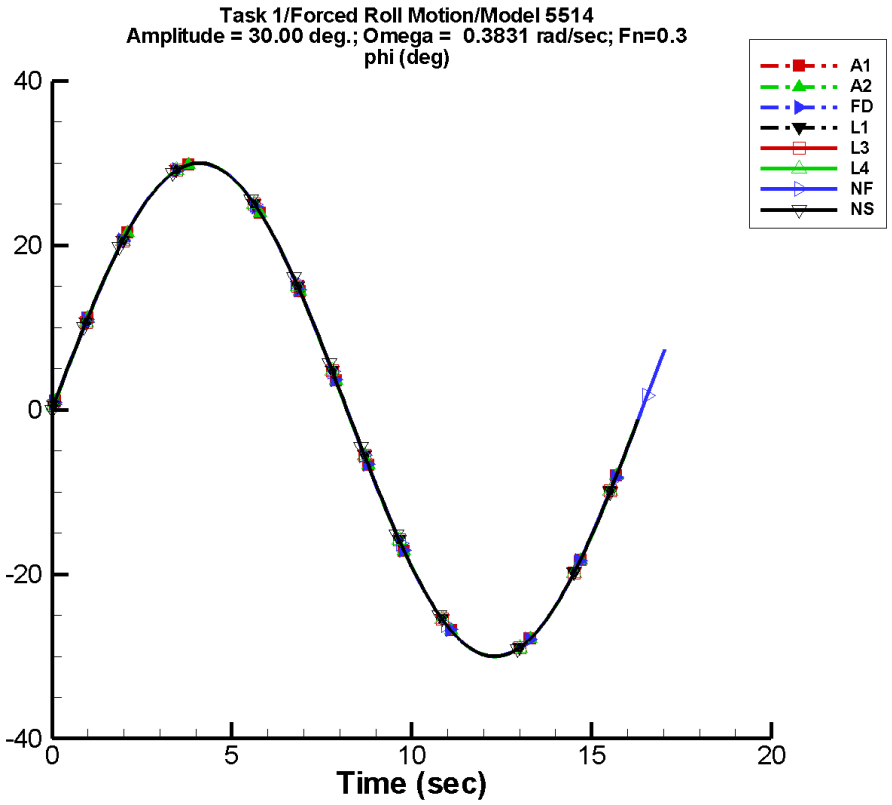



Figure D–23. Time history of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–45. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.43E-06 | 30.0 | 0 | 2.79E-06 | 99 |
| A2 | 1.43E-06 | 30.0 | 0 | 2.79E-06 | 99 |
| FD | 4.46E-06 | 30.0 | 0 | 1.45E-06 | 167 |
| L1 | 2.76E-04 | 30.0 | 0 | 5.99E-06 | 88 |
| L3 | 2.76E-04 | 30.0 | 0 | 5.99E-06 | 88 |
| L4 | 2.76E-04 | 30.0 | 0 | 5.99E-06 | 88 |
| NF | 0.344 | 29.4 | 38 | 1.60 | -130 |
| NS | -1.69E-07 | 30.0 | 0 | 7.75E-07 | -63 |

Table D–46. Minimum and maximum of of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -30.0 | 30.0 | -29.9 | 30.1 |
| A2 | -30.0 | 30.0 | -29.9 | 30.1 |
| FD | -30.0 | 30.0 | -29.9 | 29.9 |
| L1 | -30.0 | 30.0 | -30.0 | 30.0 |
| L3 | -30.0 | 30.0 | -30.0 | 30.0 |
| L4 | -30.0 | 30.0 | -30.0 | 30.0 |
| NF | -30.0 | 30.0 | -29.8 | 29.8 |
| NS | -30.0 | 30.0 | -29.9 | 29.9 |

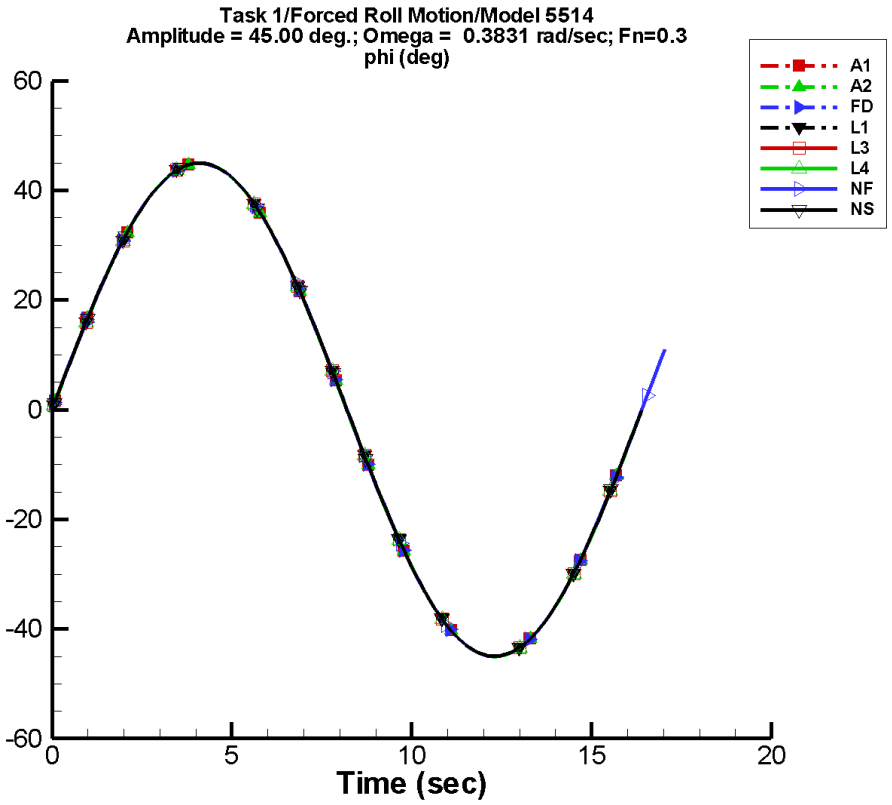



Figure D–24. Time history of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–47. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.38E-06 | 45.0 | 0 | 5.87E-06 | -49 |
| A2 | -3.38E-06 | 45.0 | 0 | 5.87E-06 | -49 |
| FD | 3.83E-06 | 45.0 | 0 | 6.29E-06 | 150 |
| L1 | 1.74E-04 | 45.0 | 0 | 4.96E-06 | 91 |
| L3 | 1.74E-04 | 45.0 | 0 | 4.96E-06 | 91 |
| L4 | 1.74E-04 | 45.0 | 0 | 4.96E-06 | 91 |
| NF | 0.516 | 44.2 | 38 | 2.39 | -130 |
| NS | -4.20E-06 | 45.0 | 0 | 5.80E-06 | 35 |

Table D–48. Minimum and maximum of of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -45.0 | 45.0 | -44.8 | 45.1 |
| A2 | -45.0 | 45.0 | -44.8 | 45.1 |
| FD | -45.0 | 45.0 | -44.8 | 44.8 |
| L1 | -45.0 | 45.0 | -44.9 | 44.9 |
| L3 | -45.0 | 45.0 | -44.9 | 44.9 |
| L4 | -45.0 | 45.0 | -44.9 | 44.9 |
| NF | -45.0 | 45.0 | -44.7 | 44.7 |
| NS | -45.0 | 45.0 | -44.9 | 44.9 |

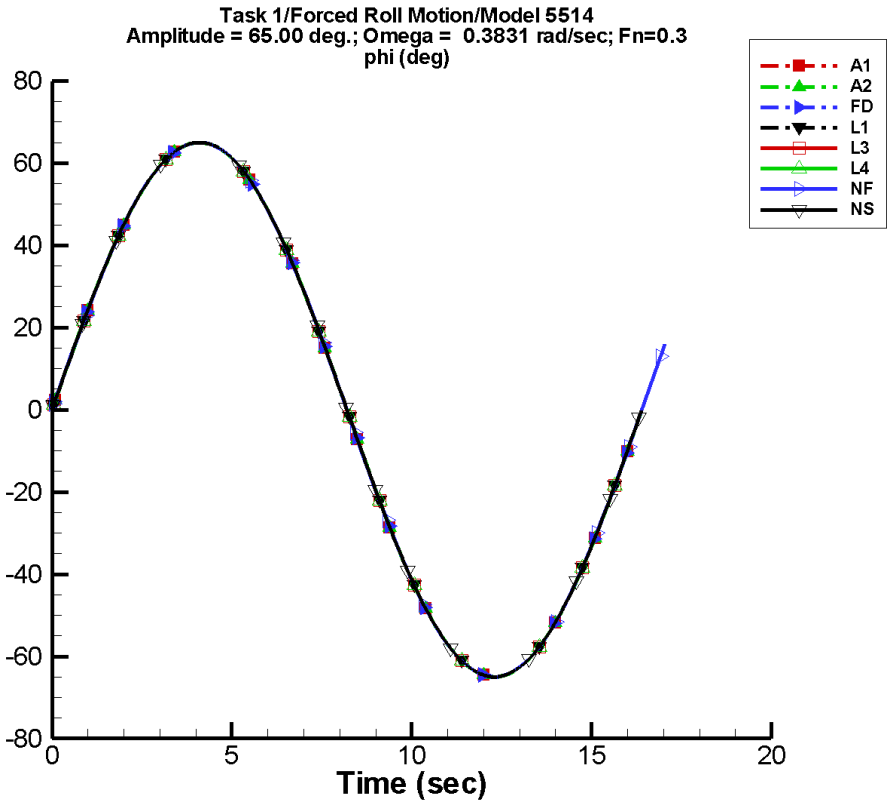


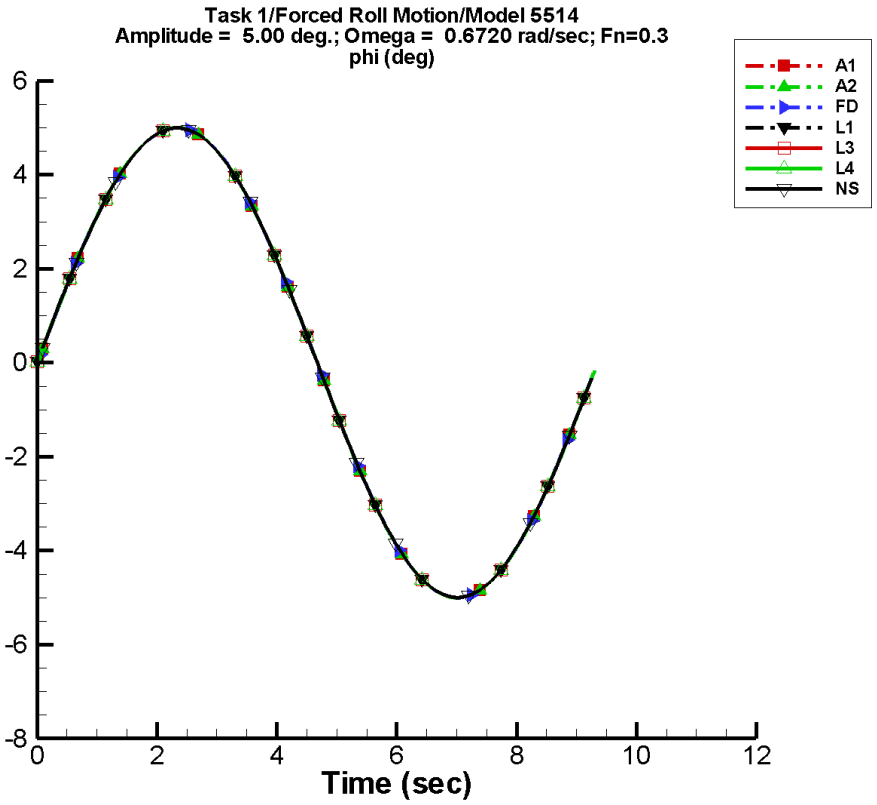

Figure D–25. Time history of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–49. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.03E-06 | 65.0 | 0 | 5.40E-06 | -51 |
| A2 | 9.03E-06 | 65.0 | 0 | 5.40E-06 | -51 |
| FD | 9.18E-06 | 65.0 | 0 | 9.68E-06 | 98 |
| L1 | 2.76E-04 | 65.0 | 0 | 7.10E-06 | 130 |
| L3 | 2.76E-04 | 65.0 | 0 | 7.10E-06 | 130 |
| L4 | 2.76E-04 | 65.0 | 0 | 7.10E-06 | 130 |
| NF | 0.746 | 63.8 | 38 | 3.47 | -130 |
| NS | -5.91E-06 | 65.0 | 0 | 1.20E-06 | -156 |

Table D–50. Minimum and maximum of of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -65.0 | 65.0 | -64.8 | 65.2 |
| A2 | -65.0 | 65.0 | -64.8 | 65.2 |
| FD | -65.0 | 65.0 | -64.8 | 64.8 |
| L1 | -65.0 | 65.0 | -64.9 | 64.9 |
| L3 | -65.0 | 65.0 | -64.9 | 64.9 |
| L4 | -65.0 | 65.0 | -64.9 | 64.9 |
| NF | -65.0 | 65.0 | -64.6 | 64.6 |
| NS | -65.0 | 65.0 | -65.0 | 65.0 |




Data identically zero, insufficient, or not available from NFA.

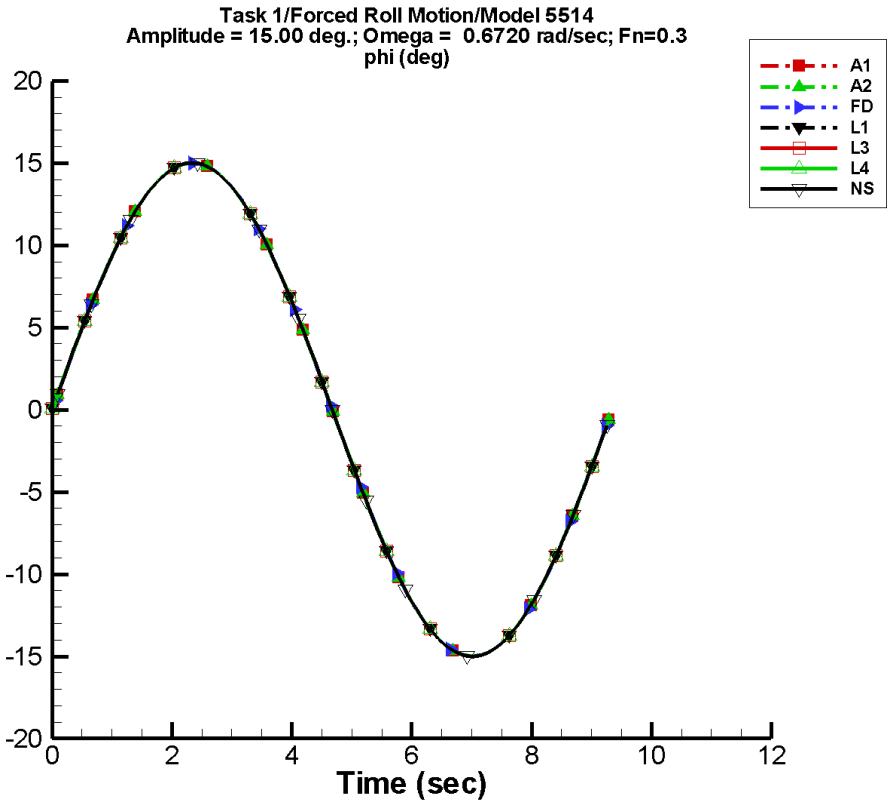
Figure D–26. Time history of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–51. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.92E-06 | 5.00 | 0 | 8.21E-06 | -17 |
| A2 | -4.92E-06 | 5.00 | 0 | 8.21E-06 | -17 |
| FD | -6.65E-06 | 5.00 | 0 | 1.07E-05 | -143 |
| L1 | 9.21E-05 | 5.00 | 0 | 5.79E-06 | 139 |
| L3 | 9.21E-05 | 5.00 | 0 | 5.79E-06 | 139 |
| L4 | 9.21E-05 | 5.00 | 0 | 5.79E-06 | 139 |
| NF | — | — | — | — | — |
| NS | -2.79E-07 | 5.00 | 0 | 5.18E-07 | 48 |

Table D–52. Minimum and maximum of of $\phi$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -5.00 | 5.00 | -4.94 | 4.94 |
| A2 | -5.00 | 5.00 | -4.94 | 4.94 |
| FD | -5.00 | 5.00 | -4.97 | 4.94 |
| L1 | -5.00 | 5.00 | -4.98 | 4.98 |
| L3 | -5.00 | 5.00 | -4.98 | 4.98 |
| L4 | -5.00 | 5.00 | -4.98 | 4.98 |
| NF | — | — | — | — |
| NS | -5.00 | 5.00 | -4.95 | 4.95 |




Data identically zero, insufficient, or not available from NFA.

Figure D–27. Time history of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–53. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.51E-05 | 15.0 | 0 | 2.53E-05 | -16 |
| A2 | -1.51E-05 | 15.0 | 0 | 2.53E-05 | -16 |
| FD | -1.95E-05 | 15.0 | 0 | 3.21E-05 | -142 |
| L1 | 2.88E-04 | 15.0 | 0 | 2.19E-05 | 126 |
| L3 | 2.88E-04 | 15.0 | 0 | 2.19E-05 | 126 |
| L4 | 2.88E-04 | 15.0 | 0 | 2.19E-05 | 126 |
| NF | — | — | — | — | — |
| NS | -8.78E-07 | 15.0 | 0 | 1.34E-06 | 73 |

Table D–54. Minimum and maximum of of $\phi$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -15.0 | 15.0 | -14.8 | 14.8 |
| A2 | -15.0 | 15.0 | -14.8 | 14.8 |
| FD | -15.0 | 15.0 | -14.9 | 14.8 |
| L1 | -15.0 | 15.0 | -14.9 | 14.9 |
| L3 | -15.0 | 15.0 | -14.9 | 14.9 |
| L4 | -15.0 | 15.0 | -14.9 | 14.9 |
| NF | — | — | — | — |
| NS | -15.0 | 15.0 | -14.9 | 14.9 |

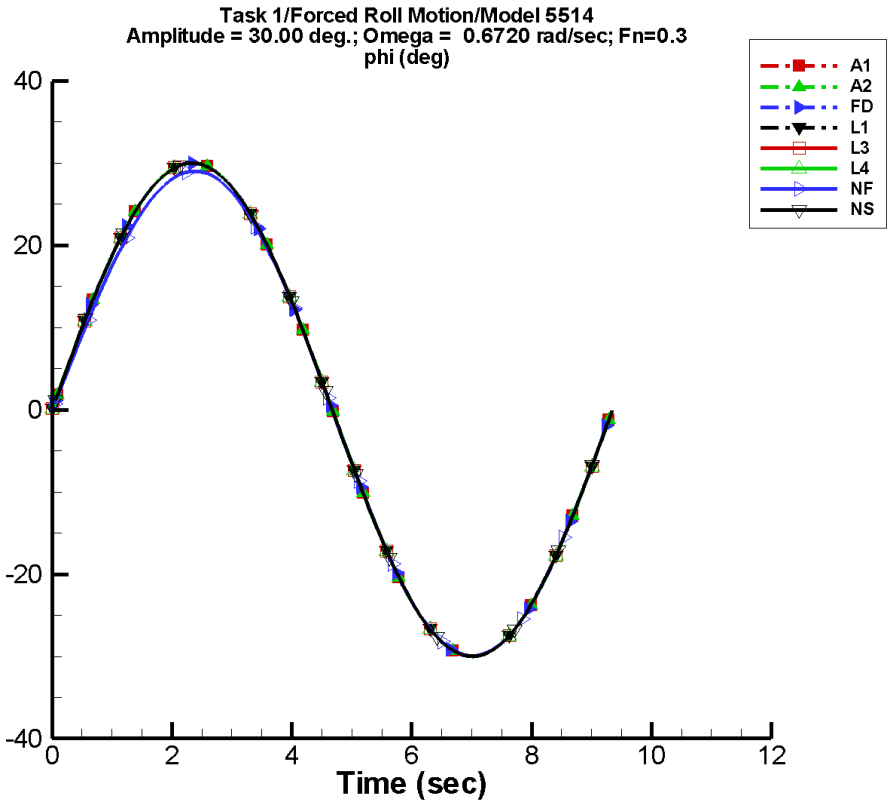



Figure D–28. Time history of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–55. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.94E-05 | 30.0 | 0 | 5.17E-05 | -18 |
| A2 | -2.94E-05 | 30.0 | 0 | 5.17E-05 | -18 |
| FD | -3.96E-05 | 30.0 | 0 | 6.41E-05 | -142 |
| L1 | 5.87E-04 | 30.0 | 0 | 3.90E-05 | 137 |
| L3 | 5.87E-04 | 30.0 | 0 | 3.90E-05 | 137 |
| L4 | 5.87E-04 | 30.0 | 0 | 3.90E-05 | 137 |
| NF | 0.753 | 29.6 | -49 | 0.886 | 88 |
| NS | 1.94E-06 | 30.0 | 0 | 1.03E-05 | 18 |

Table D–56. Minimum and maximum of of $\phi$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -30.0 | 30.0 | -29.7 | 29.6 |
| A2 | -30.0 | 30.0 | -29.7 | 29.6 |
| FD | -30.0 | 30.0 | -29.8 | 29.7 |
| L1 | -30.0 | 30.0 | -29.9 | 29.9 |
| L3 | -30.0 | 30.0 | -29.9 | 29.9 |
| L4 | -30.0 | 30.0 | -29.9 | 29.9 |
| NF | -30.0 | 30.0 | -29.8 | 29.9 |
| NS | -30.0 | 30.0 | -29.9 | 29.9 |

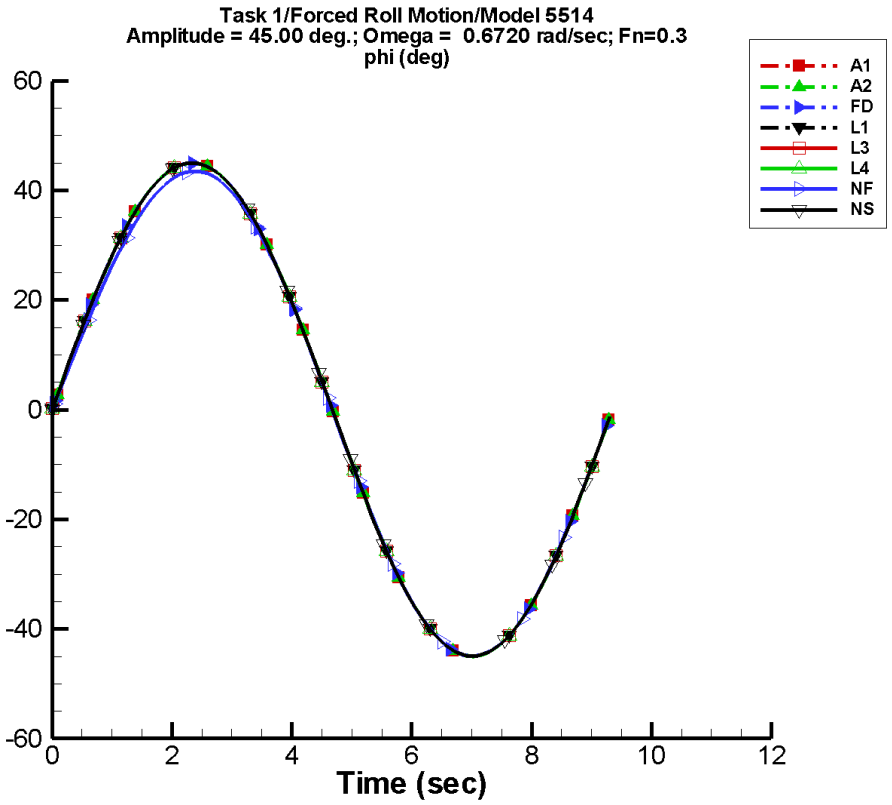



Figure D–29. Time history of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–57. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.72E-05 | 45.0 | 0 | 7.50E-05 | -17 |
| A2 | -4.72E-05 | 45.0 | 0 | 7.50E-05 | -17 |
| FD | -5.69E-05 | 45.0 | 0 | 9.63E-05 | -142 |
| L1 | 8.14E-04 | 45.0 | 0 | 5.39E-05 | 143 |
| L3 | 8.14E-04 | 45.0 | 0 | 5.39E-05 | 143 |
| L4 | 8.14E-04 | 45.0 | 0 | 5.39E-05 | 143 |
| NF | 1.13 | 44.4 | -49 | 1.33 | 88 |
| NS | 5.33E-07 | 45.0 | 0 | 4.98E-06 | 106 |

Table D–58. Minimum and maximum of of $\phi$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -45.0 | 45.0 | -44.5 | 44.5 |
| A2 | -45.0 | 45.0 | -44.5 | 44.5 |
| FD | -45.0 | 45.0 | -44.8 | 44.5 |
| L1 | -45.0 | 45.0 | -44.8 | 44.8 |
| L3 | -45.0 | 45.0 | -44.8 | 44.8 |
| L4 | -45.0 | 45.0 | -44.8 | 44.8 |
| NF | -44.9 | 45.0 | -44.7 | 44.8 |
| NS | -45.0 | 45.0 | -44.9 | 44.9 |

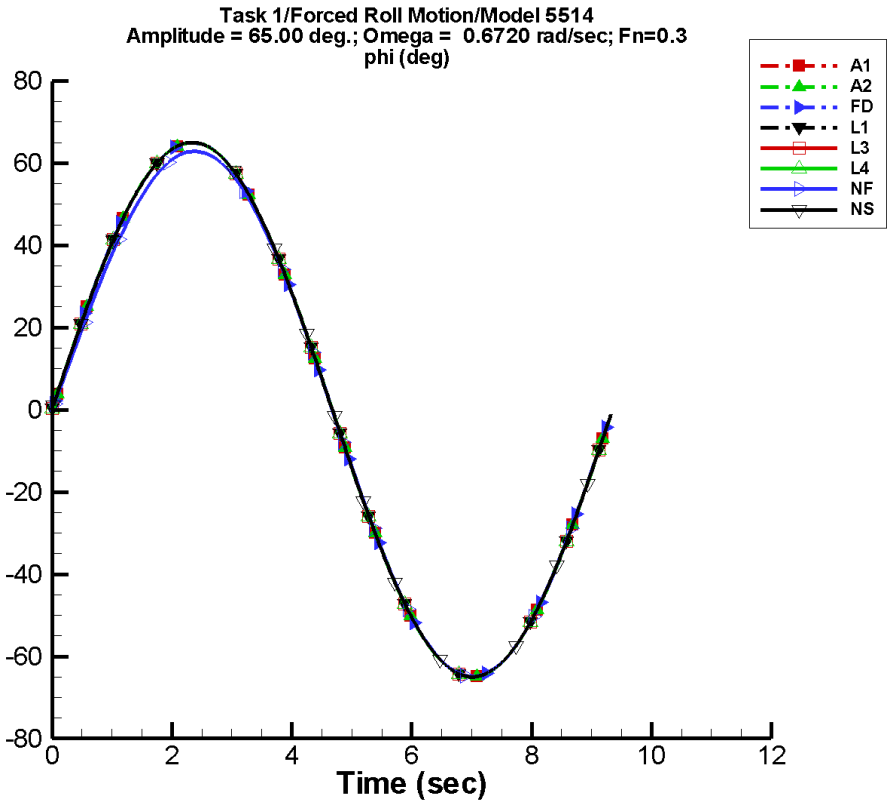


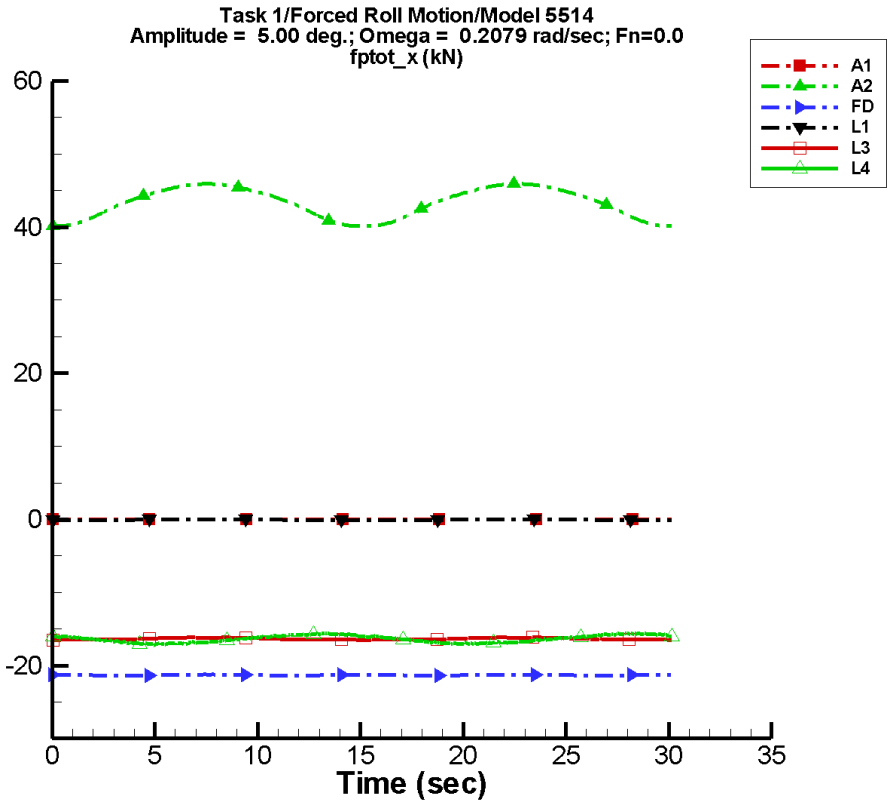

Figure D–30. Time history of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–59. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (deg) | $a_1$ (deg) | $\Phi_1$ (deg) | $a_2$ (deg) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.81E-05 | 65.0 | 0 | 1.09E-04 | -17 |
| A2 | -6.81E-05 | 65.0 | 0 | 1.09E-04 | -17 |
| FD | -8.29E-05 | 65.0 | 0 | 1.37E-04 | -144 |
| L1 | 1.24E-03 | 65.0 | 0 | 8.25E-05 | 139 |
| L3 | 1.24E-03 | 65.0 | 0 | 8.25E-05 | 139 |
| L4 | 1.24E-03 | 65.0 | 0 | 8.25E-05 | 139 |
| NF | 1.63 | 64.2 | -49 | 1.92 | 88 |
| NS | -4.64E-06 | 65.0 | 0 | 8.83E-06 | -157 |

Table D–60. Minimum and maximum of of $\phi$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (deg) | Maximum (deg) | Minimum (deg) | Maximum (deg) |
| A1 | -65.0 | 65.0 | -64.2 | 64.2 |
| A2 | -65.0 | 65.0 | -64.2 | 64.2 |
| FD | -65.0 | 65.0 | -64.7 | 64.3 |
| L1 | -65.0 | 65.0 | -64.7 | 64.7 |
| L3 | -65.0 | 65.0 | -64.7 | 64.7 |
| L4 | -65.0 | 65.0 | -64.7 | 64.7 |
| NF | -64.9 | 65.0 | -64.6 | 64.7 |
| NS | -65.0 | 65.0 | -65.0 | 65.0 |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

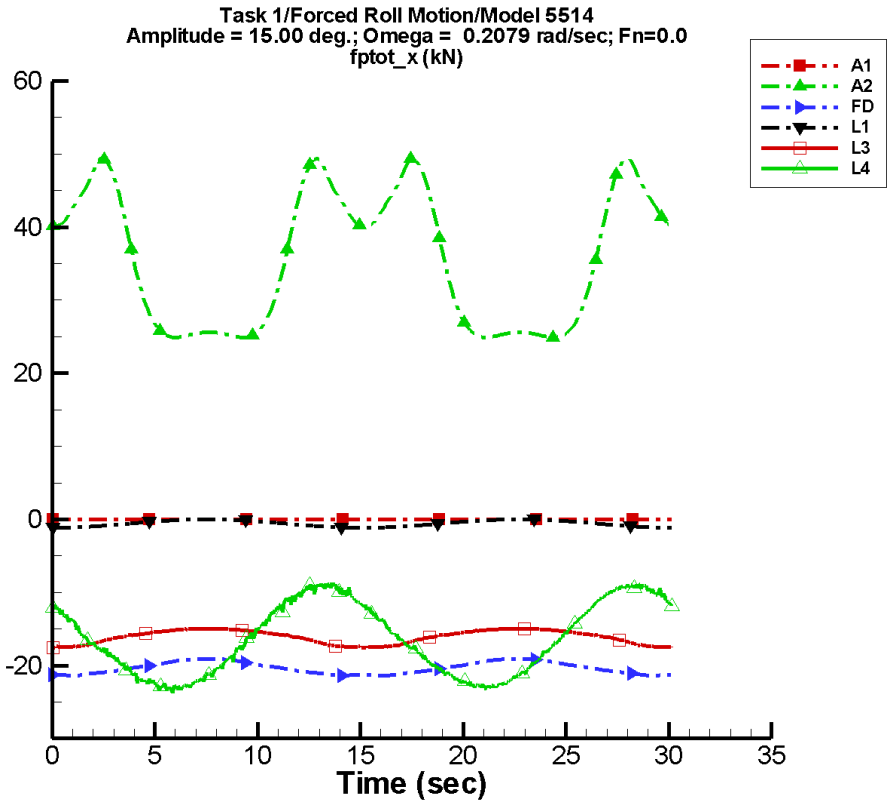
Figure D–31. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–61. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.89E-05 | 1.58E-03 | 0 | 1.55E-05 | 44 |
| A2 | 43.3 | 6.55E-03 | 12 | 2.86 | -90 |
| FD | -21.3 | 1.25E-03 | -169 | 2.19E-02 | -105 |
| L1 | -6.37E-02 | 3.59E-05 | 177 | 6.38E-02 | -91 |
| L3 | -16.3 | 1.98E-03 | 119 | 0.140 | -91 |
| L4 | -16.4 | 7.66E-03 | 146 | 0.656 | 139 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–62. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -9.40E-03 | 9.46E-03 | -2.30E-03 | 2.32E-03 |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | -0.128 | 4.39E-05 | -0.127 | -5.54E-05 |
| L3 | -16.5 | -16.1 | -16.5 | -16.2 |
| L4 | -17.2 | -15.6 | -17.1 | -15.7 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

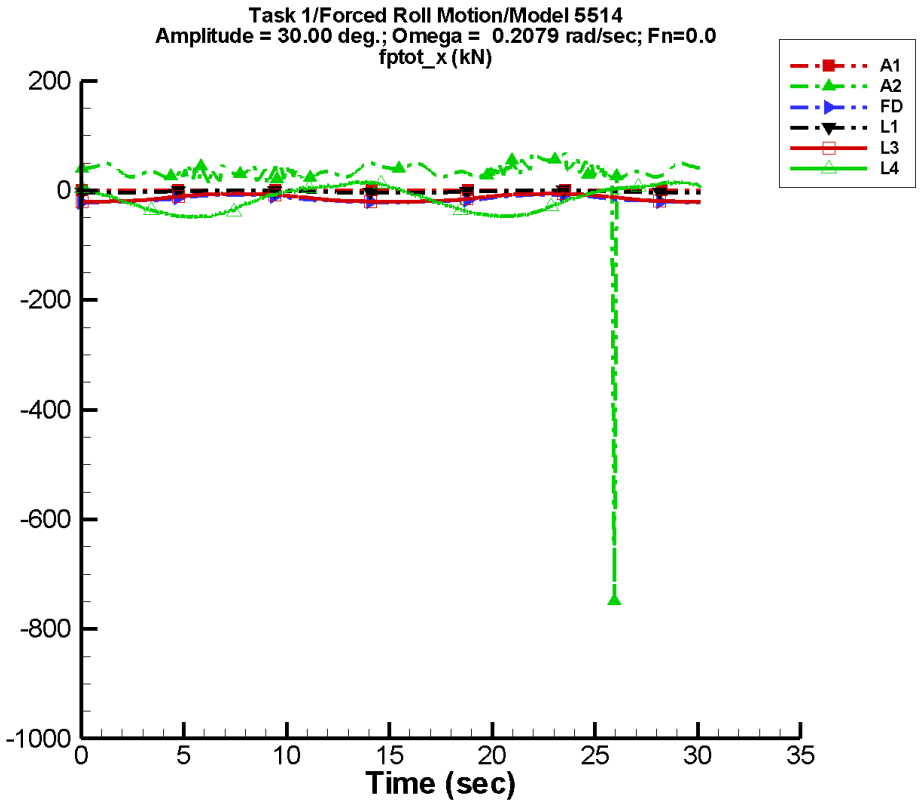
Figure D–32. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–63. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.67E-05 | 4.73E-03 | 0 | 4.64E-05 | 44 |
| A2 | 35.6 | 7.13E-02 | -56 | 11.7 | 87 |
| FD | -20.3 | 3.06E-03 | -170 | 1.12 | -91 |
| L1 | -0.574 | 1.16E-04 | 173 | 0.574 | -91 |
| L3 | -16.1 | 1.47E-02 | -61 | 1.26 | -91 |
| L4 | -16.3 | 8.59E-02 | -119 | 6.79 | 133 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–64. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.82E-02 | 2.84E-02 | -6.89E-03 | 6.95E-03 |
| A2 | 24.9 | 49.4 | 24.9 | 48.9 |
| FD | -21.4 | -19.1 | -21.4 | -19.1 |
| L1 | -1.15 | 1.76E-04 | -1.15 | -7.28E-04 |
| L3 | -17.6 | -15.0 | -17.5 | -15.0 |
| L4 | -23.8 | -8.72 | -23.2 | -9.03 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

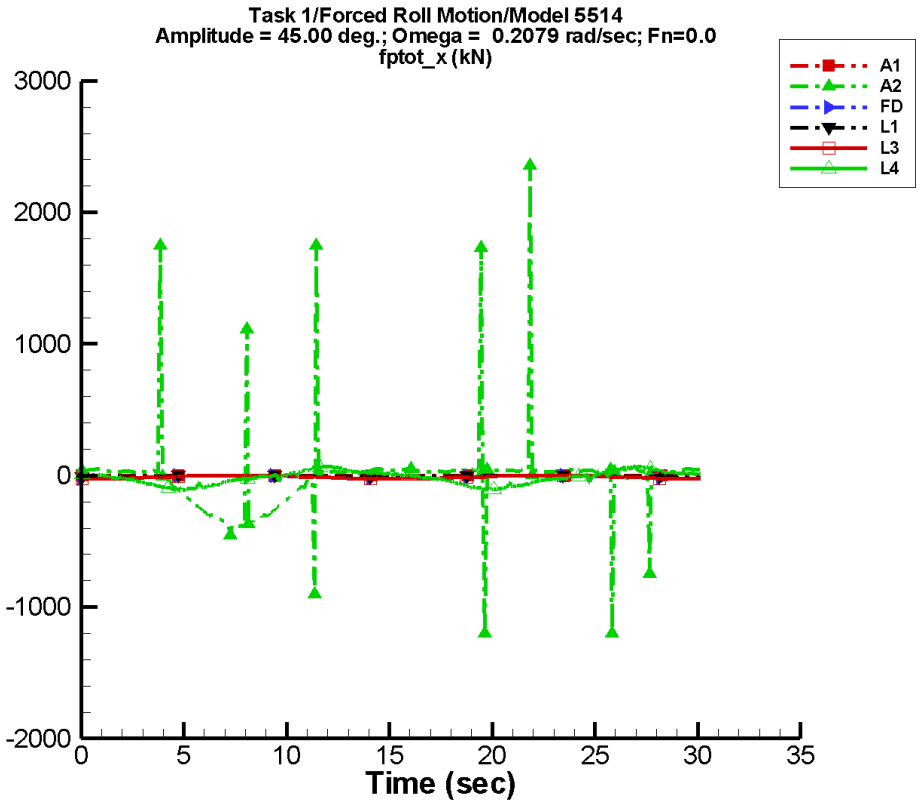
Figure D–33. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–65. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.13E-04 | 9.47E-03 | 0 | 9.27E-05 | 44 |
| A2 | 33.7 | 3.43 | -123 | 5.04 | 23 |
| FD | -15.6 | 2.05E-02 | -171 | 6.73 | -91 |
| L1 | -2.29 | 2.53E-04 | 168 | 2.30 | -91 |
| L3 | -13.9 | 6.00E-02 | 118 | 7.83 | -91 |
| L4 | -15.1 | 0.198 | 134 | 29.9 | 142 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–66. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -5.64E-02 | 5.67E-02 | -1.38E-02 | 1.39E-02 |
| A2 | -748. | 69.2 | -77.4 | 58.6 |
| FD | -21.4 | -7.97 | -21.3 | -8.00 |
| L1 | -4.59 | 4.89E-04 | -4.59 | -3.13E-03 |
| L3 | -21.0 | -5.97 | -20.9 | -5.97 |
| L4 | -48.9 | 16.9 | -47.7 | 14.5 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

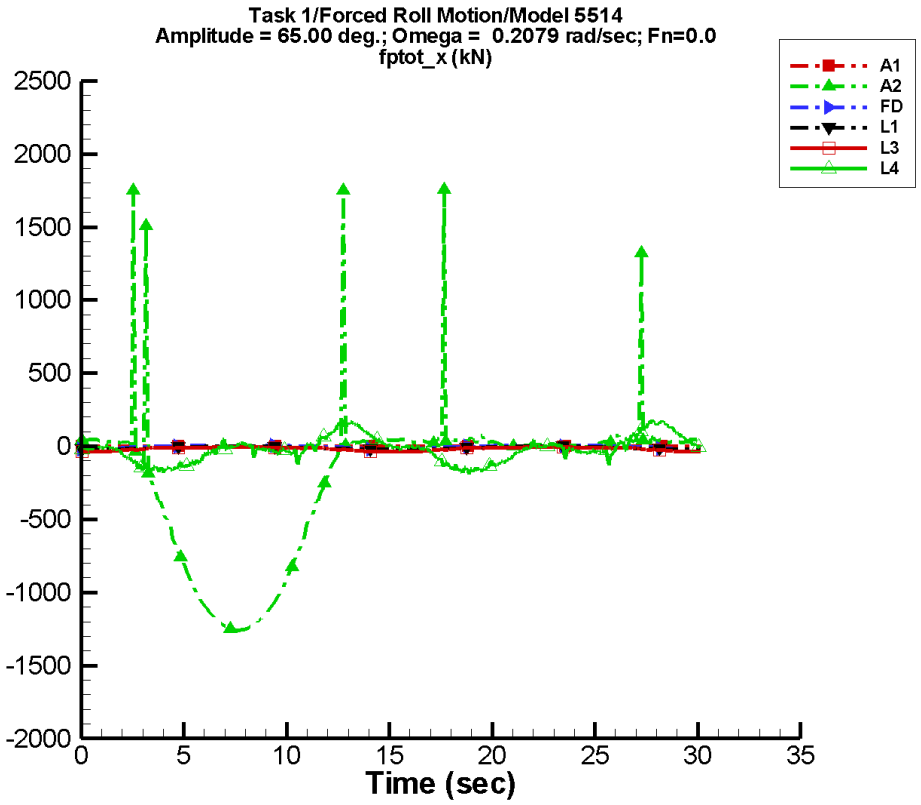
Figure D–34. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–67. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.70E-04 | 1.42E-02 | 0 | 1.39E-04 | 44 |
| A2 | -16.4 | 119. | -177 | 96.3 | 70 |
| FD | -9.65 | 2.29E-02 | 15 | 11.2 | -89 |
| L1 | -5.16 | 4.19E-04 | 163 | 5.16 | -91 |
| L3 | -12.7 | 3.66E-02 | -24 | 13.6 | -91 |
| L4 | -16.4 | 0.255 | 30 | 66.7 | 151 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–68. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.46E-02 | 8.51E-02 | -2.07E-02 | 2.09E-02 |
| A2 | -1.20E+03 | 2.36E+03 | -391. | 349. |
| FD | -21.4 | 0.541 | -21.4 | 0.514 |
| L1 | -10.3 | 9.52E-04 | -10.3 | -7.21E-03 |
| L3 | -26.7 | -0.206 | -26.6 | -0.385 |
| L4 | -111. | 70.0 | -104. | 67.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

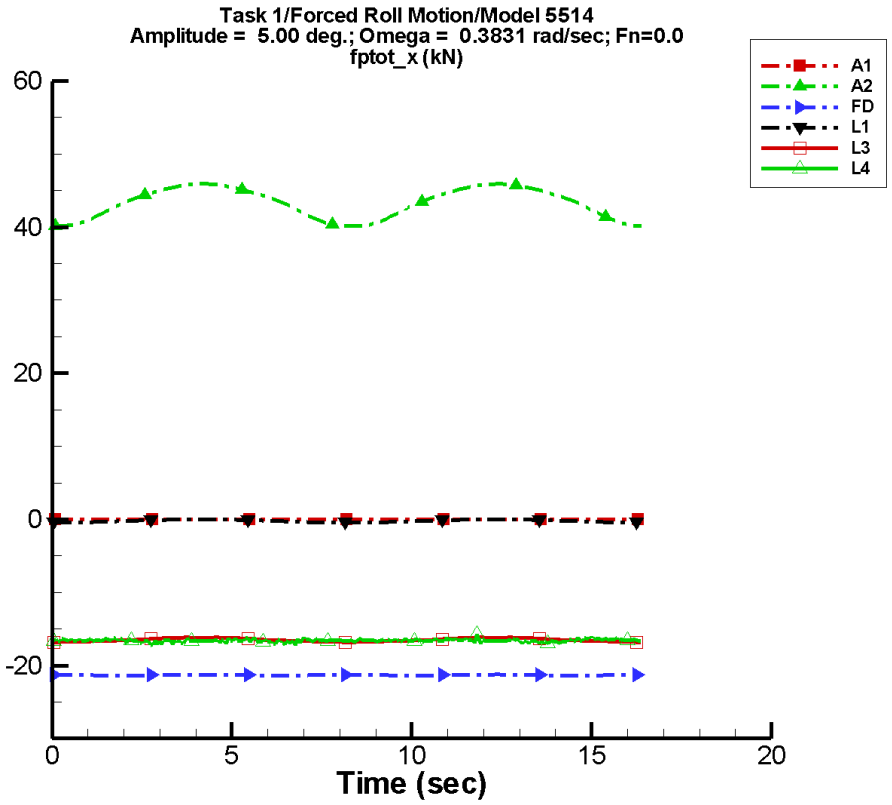
Figure D–35. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–69. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.46E-04 | 2.05E-02 | 0 | 2.01E-04 | 44 |
| A2 | -212. | 475. | 177 | 402. | 84 |
| FD | -5.09 | 0.114 | 5 | 11.8 | -88 |
| L1 | -10.8 | 6.77E-04 | 159 | 10.8 | -91 |
| L3 | -18.0 | 0.379 | -60 | 14.5 | -91 |
| L4 | -22.1 | 2.18 | -152 | 92.7 | 156 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–70. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.122 | 0.123 | -2.98E-02 | 3.01E-02 |
| A2 | -1.26E+03 | 1.76E+03 | -1.26E+03 | 263. |
| FD | -21.4 | 4.06 | -21.3 | 3.87 |
| L1 | -21.6 | 1.76E-03 | -21.5 | -1.52E-02 |
| L3 | -38.0 | -6.20 | -37.9 | -6.29 |
| L4 | -193. | 184. | -164. | 161. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

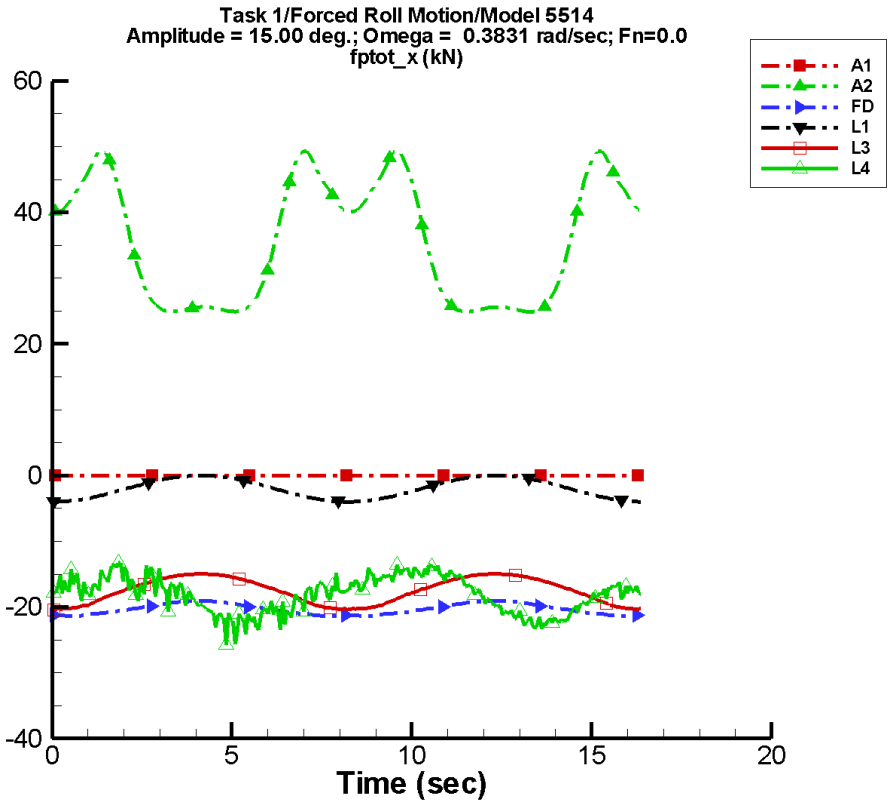
Figure D–36. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–71. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -7.56E-05 | 6.83E-03 | -6 | 1.42E-04 | -26 |
| A2 | 43.3 | 1.21E-02 | 1 | 2.86 | -94 |
| FD | -21.3 | 3.24E-03 | 117 | 2.62E-02 | -93 |
| L1 | -0.222 | 1.54E-04 | 171 | 0.222 | -92 |
| L3 | -16.5 | 1.59E-03 | -159 | 0.295 | -92 |
| L4 | -16.6 | 3.70E-02 | 152 | 5.03E-02 | 80 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–72. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.53E-02 | 1.14E-02 | -8.49E-03 | 7.50E-03 |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | -0.444 | 2.69E-04 | -0.444 | -9.19E-04 |
| L3 | -16.9 | -16.2 | -16.8 | -16.2 |
| L4 | -17.3 | -15.7 | -16.9 | -16.3 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

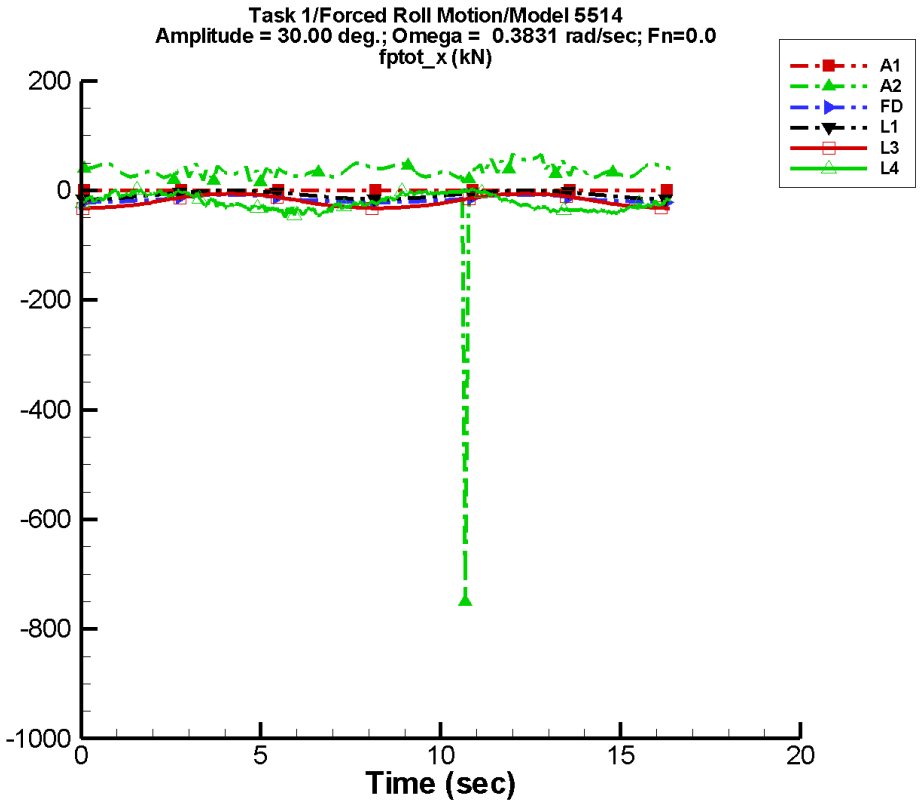
Figure D–37. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–73. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.27E-04 | 2.05E-02 | -6 | 4.26E-04 | -26 |
| A2 | 35.6 | 9.49E-02 | -45 | 11.7 | 85 |
| FD | -20.3 | 5.42E-03 | 123 | 1.13 | -90 |
| L1 | -2.00 | 4.02E-04 | 179 | 2.00 | -92 |
| L3 | -17.5 | 7.70E-03 | 11 | 2.71 | -92 |
| L4 | -18.2 | 0.414 | -137 | 3.34 | 25 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–74. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E-02 | 3.42E-02 | -2.55E-02 | 2.25E-02 |
| A2 | 24.9 | 49.4 | 25.0 | 47.9 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | -4.00 | 1.44E-03 | -4.00 | -9.24E-03 |
| L3 | -20.4 | -15.0 | -20.4 | -15.0 |
| L4 | -25.7 | -13.3 | -22.7 | -14.1 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

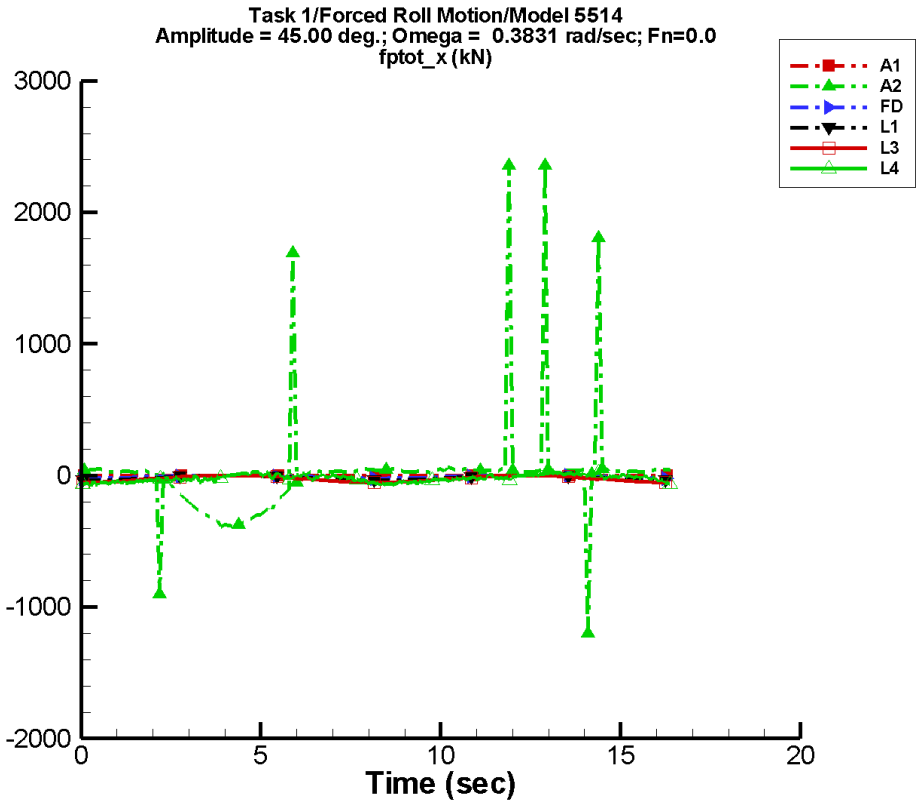
Figure D–38. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–75. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.53E-04 | 4.10E-02 | -6 | 8.52E-04 | -26 |
| A2 | 32.3 | 6.84 | 65 | 8.86 | 161 |
| FD | -15.6 | 6.56E-02 | 122 | 6.81 | -90 |
| L1 | -7.99 | 6.42E-04 | -165 | 7.99 | -92 |
| L3 | -19.5 | 4.00E-02 | -174 | 13.4 | -92 |
| L4 | -21.1 | 1.04 | -130 | 17.9 | 8 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–76. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -9.20E-02 | 6.84E-02 | -5.09E-02 | 4.50E-02 |
| A2 | -750. | 67.2 | -73.5 | 58.1 |
| FD | -21.4 | -7.97 | -21.3 | -8.09 |
| L1 | -16.0 | 4.75E-03 | -16.0 | -3.79E-02 |
| L3 | -32.4 | -5.97 | -32.4 | -6.08 |
| L4 | -49.8 | 2.41 | -39.9 | -0.745 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

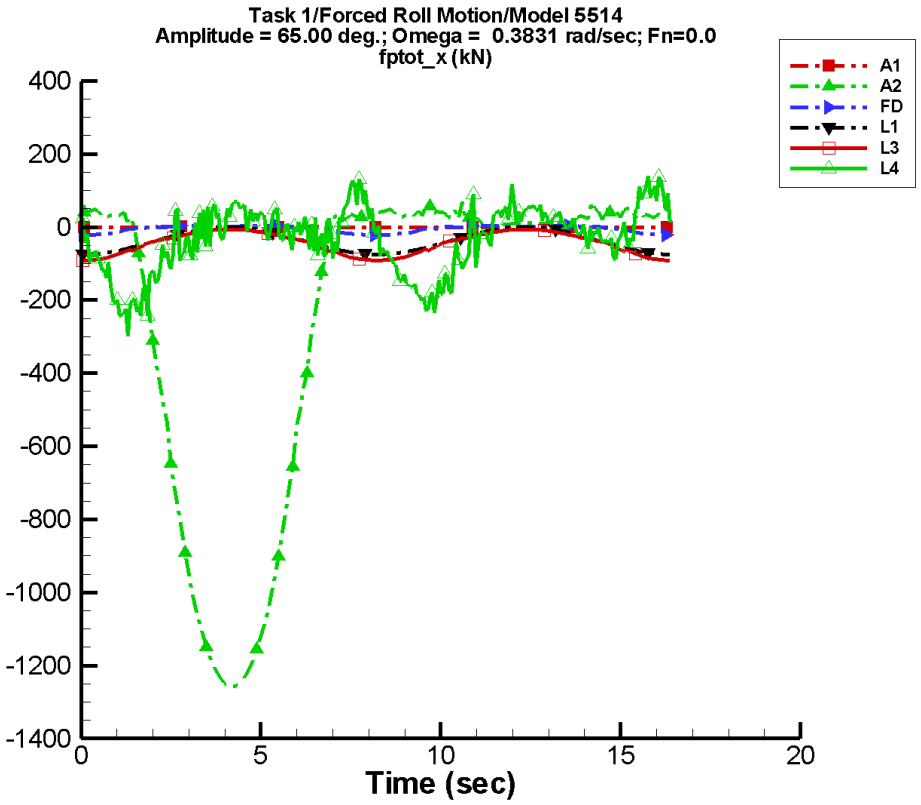
Figure D–39. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–77. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.80E-04 | 6.14E-02 | -6 | 1.28E-03 | -26 |
| A2 | 12.0 | 173. | 178 | 65.6 | 103 |
| FD | -9.60 | 0.109 | -60 | 11.1 | -90 |
| L1 | -18.0 | 7.90E-04 | -142 | 18.0 | -92 |
| L3 | -25.5 | 8.86E-02 | -15 | 26.5 | -92 |
| L4 | -22.0 | 3.37 | -174 | 31.3 | -132 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–78. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.138 | 0.103 | -7.64E-02 | 6.75E-02 |
| A2 | -1.20E+03 | 2.36E+03 | -373. | 332. |
| FD | -21.4 | 0.539 | -21.3 | 0.472 |
| L1 | -36.0 | 9.96E-03 | -36.0 | -8.60E-02 |
| L3 | -52.4 | -0.389 | -52.4 | -0.472 |
| L4 | -81.7 | 29.9 | -68.7 | 18.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

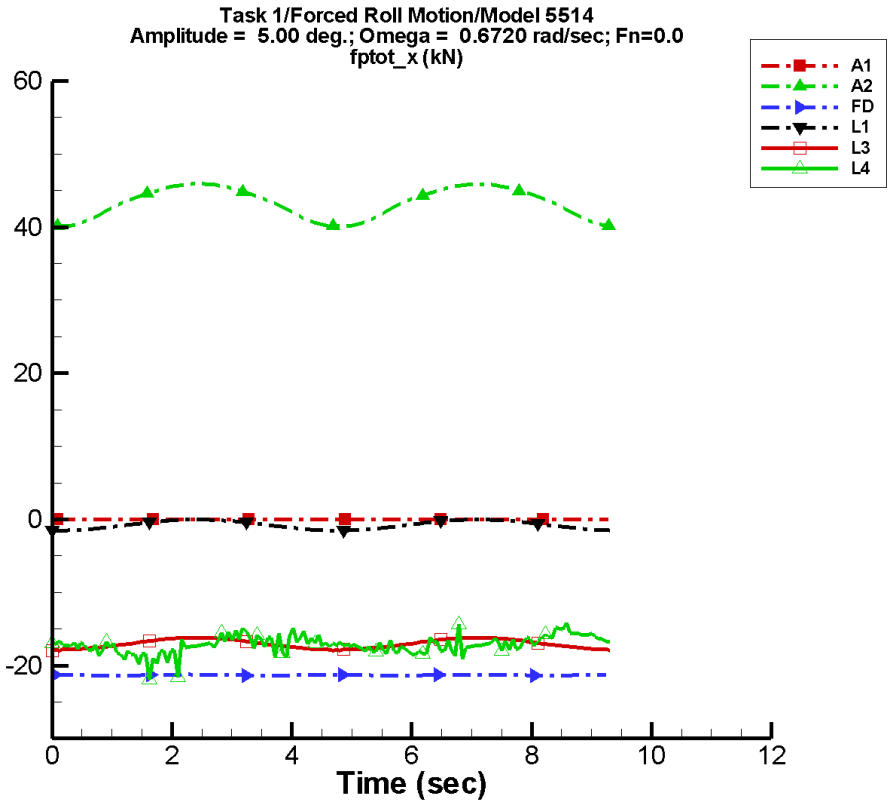
Figure D–40. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–79. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.82E-04 | 8.87E-02 | -6 | 1.85E-03 | -26 |
| A2 | -234. | 478. | 176 | 384. | 83 |
| FD | -5.02 | 0.207 | -61 | 11.5 | -89 |
| L1 | -37.5 | 1.29E-03 | -108 | 37.5 | -92 |
| L3 | -44.8 | 0.258 | -16 | 41.9 | -91 |
| L4 | -36.5 | 11.5 | -146 | 87.7 | -155 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–80. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.199 | 0.148 | -0.110 | 9.75E-02 |
| A2 | -1.26E+03 | 70.2 | -1.25E+03 | 47.9 |
| FD | -21.4 | 4.05 | -21.2 | 3.38 |
| L1 | -75.1 | 1.99E-02 | -75.1 | -0.180 |
| L3 | -91.5 | -6.34 | -91.5 | -6.45 |
| L4 | -300. | 140. | -234. | 109. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

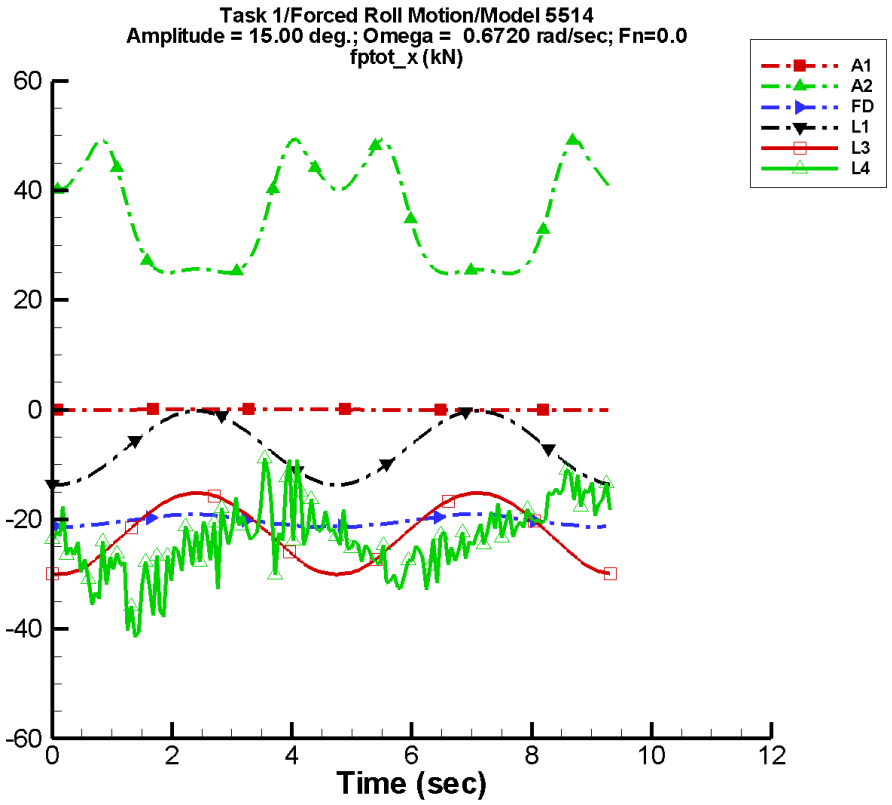
Figure D–41. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–81. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.85E-04 | 2.55E-02 | -31 | 7.13E-04 | -106 |
| A2 | 43.3 | 4.49E-02 | -21 | 2.88 | -97 |
| FD | -21.3 | 4.63E-03 | 147 | 2.49E-02 | -103 |
| L1 | -0.774 | 3.17E-04 | 153 | 0.750 | -96 |
| L3 | -17.0 | 2.78E-03 | -169 | 0.820 | -96 |
| L4 | -17.1 | 0.246 | 162 | 1.08 | 157 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–82. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.69E-02 | 2.86E-02 | -2.65E-02 | 2.80E-02 |
| A2 | 40.2 | 45.9 | 40.2 | 45.8 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | -1.52 | -2.42E-02 | -1.52 | -3.64E-02 |
| L3 | -17.9 | -16.2 | -17.9 | -16.2 |
| L4 | -21.9 | -14.1 | -19.2 | -15.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

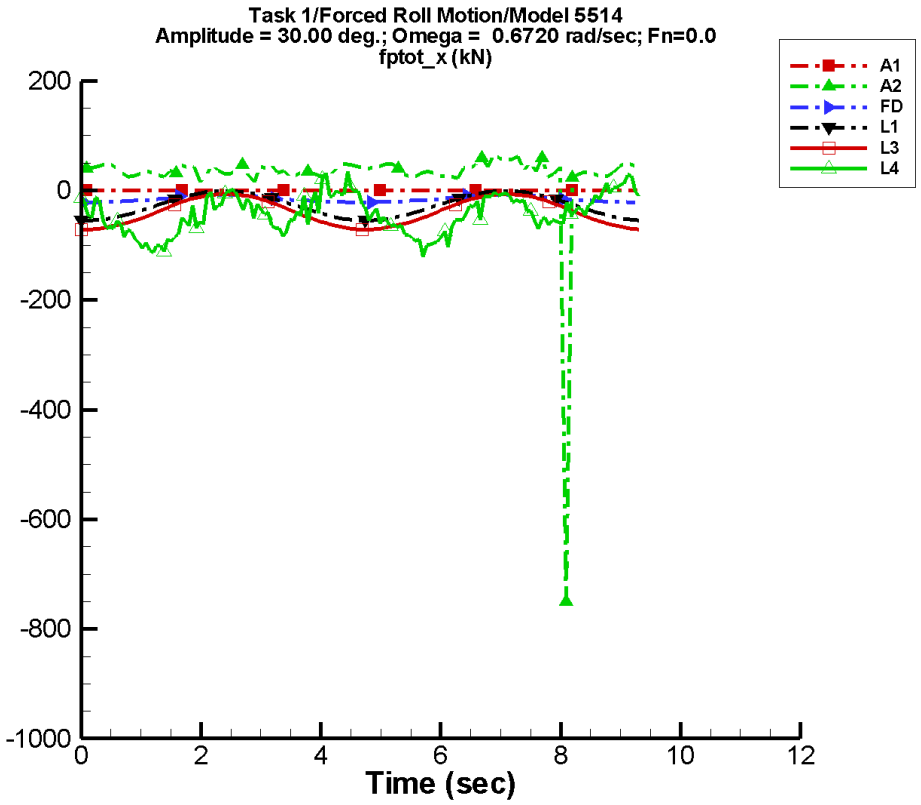
Figure D–42. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–83. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.54E-04 | 7.64E-02 | -31 | 2.14E-03 | -106 |
| A2 | 35.6 | 0.161 | -52 | 11.7 | 81 |
| FD | -20.3 | 1.00E-02 | 152 | 1.13 | -91 |
| L1 | -6.97 | 5.33E-04 | 173 | 6.75 | -96 |
| L3 | -22.5 | 1.35E-02 | -2 | 7.46 | -96 |
| L4 | -23.8 | 1.86 | 180 | 7.26 | 161 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–84. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.07E-02 | 8.58E-02 | -7.94E-02 | 8.39E-02 |
| A2 | 24.8 | 49.4 | 25.0 | 46.0 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | -13.7 | -0.219 | -13.7 | -0.329 |
| L3 | -30.1 | -15.2 | -30.1 | -15.3 |
| L4 | -42.4 | -8.82 | -35.0 | -14.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

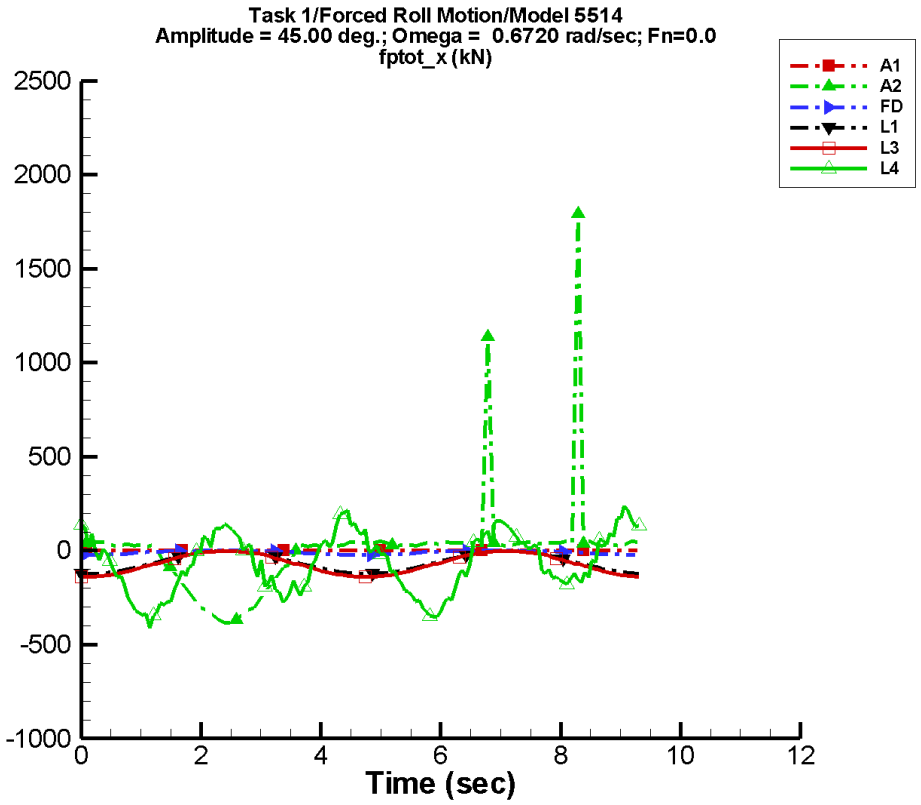
Figure D–43. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–85. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.11E-03 | 0.153 | -31 | 4.28E-03 | -106 |
| A2 | 28.5 | 12.8 | -56 | 15.1 | 12 |
| FD | -15.5 | 7.12E-02 | 150 | 6.78 | -91 |
| L1 | -27.9 | 9.94E-04 | -101 | 27.0 | -96 |
| L3 | -39.4 | 5.02E-02 | -177 | 32.4 | -96 |
| L4 | -44.1 | 6.34 | -168 | 30.7 | 170 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–86. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.161 | 0.172 | -0.159 | 0.168 |
| A2 | -750. | 66.3 | -71.8 | 62.7 |
| FD | -21.4 | -7.97 | -21.3 | -8.19 |
| L1 | -54.9 | -0.876 | -54.9 | -1.32 |
| L3 | -71.3 | -6.86 | -71.3 | -7.36 |
| L4 | -121. | 34.0 | -104. | 11.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

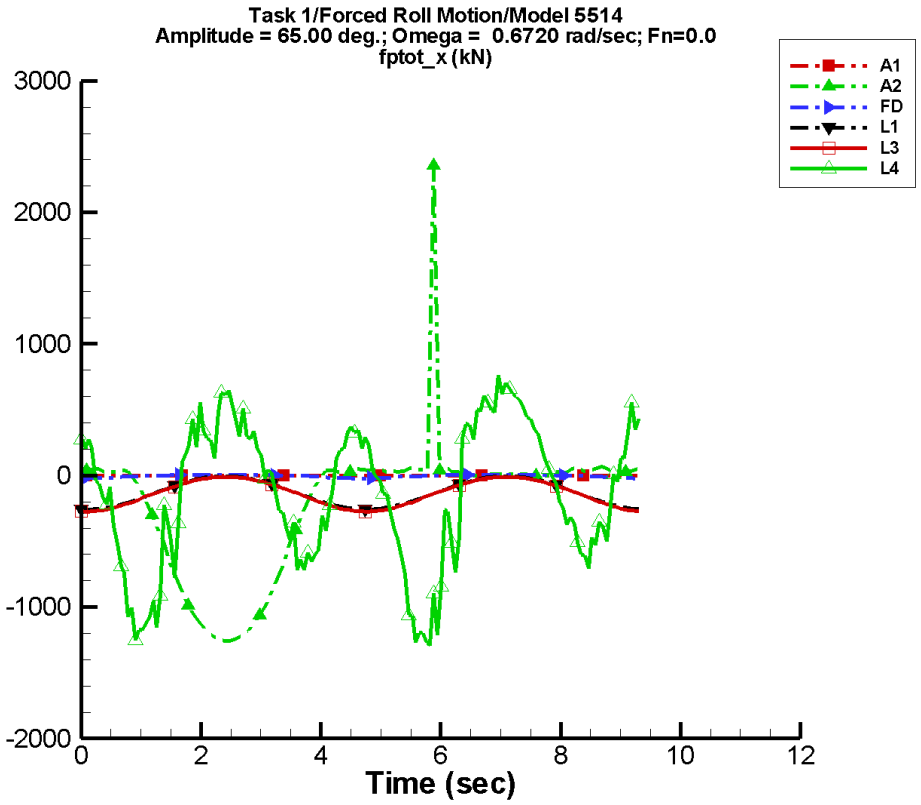
Figure D–44. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–87. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.66E-03 | 0.229 | -31 | 6.41E-03 | -106 |
| A2 | 5.47 | 168. | 166 | 79.8 | 93 |
| FD | -9.68 | 7.96E-02 | -31 | 11.2 | -89 |
| L1 | -62.7 | 3.28E-03 | -73 | 60.7 | -96 |
| L3 | -70.2 | 4.73E-02 | -130 | 69.3 | -96 |
| L4 | -70.8 | 31.2 | 177 | 97.5 | 169 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–88. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.242 | 0.257 | -0.238 | 0.252 |
| A2 | -383. | 1.79E+03 | -353. | 279. |
| FD | -21.4 | 0.538 | -21.2 | 0.365 |
| L1 | -123. | -1.97 | -123. | -2.97 |
| L3 | -140. | -2.37 | -140. | -3.39 |
| L4 | -412. | 239. | -343. | 164. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

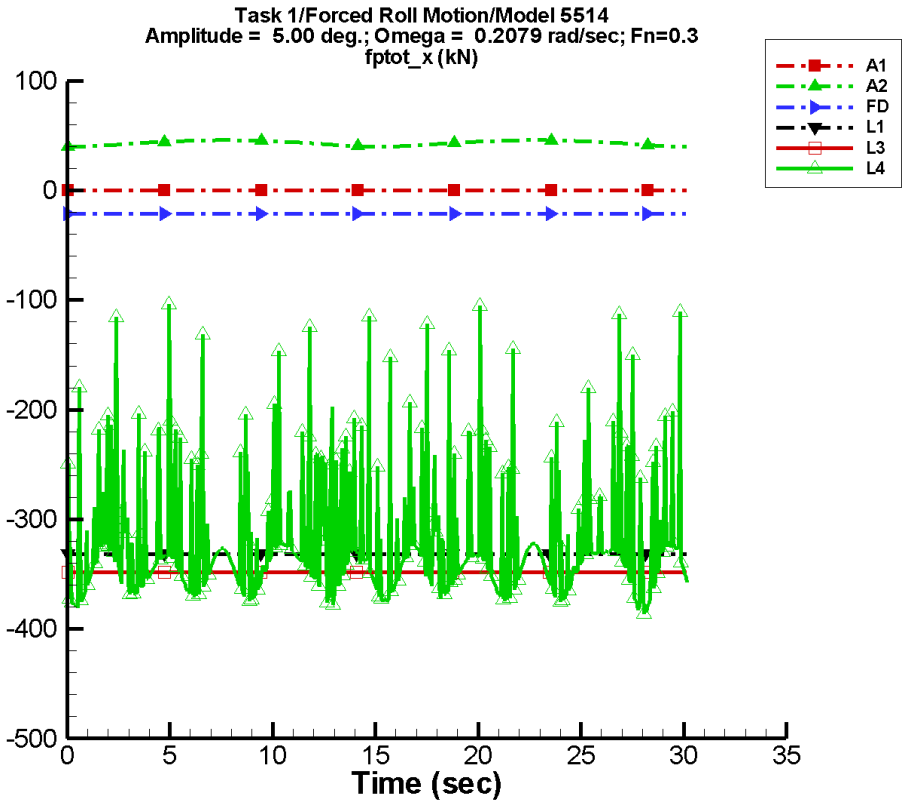
Figure D–45. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–89. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.40E-03 | 0.331 | -31 | 9.27E-03 | -106 |
| A2 | -203. | 501. | 179 | 379. | 72 |
| FD | -5.22 | 0.352 | -29 | 11.6 | -88 |
| L1 | -131. | 8.67E-03 | -64 | 127. | -96 |
| L3 | -138. | 0.331 | -1 | 131. | -96 |
| L4 | -155. | 91.6 | 179 | 379. | -142 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–90. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.350 | 0.372 | -0.344 | 0.363 |
| A2 | -1.26E+03 | 2.36E+03 | -1.22E+03 | 349. |
| FD | -21.4 | 4.06 | -20.8 | 2.74 |
| L1 | -258. | -4.12 | -258. | -6.20 |
| L3 | -274. | -10.5 | -274. | -12.5 |
| L4 | -1.31E+03 | 760. | -1.15E+03 | 620. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

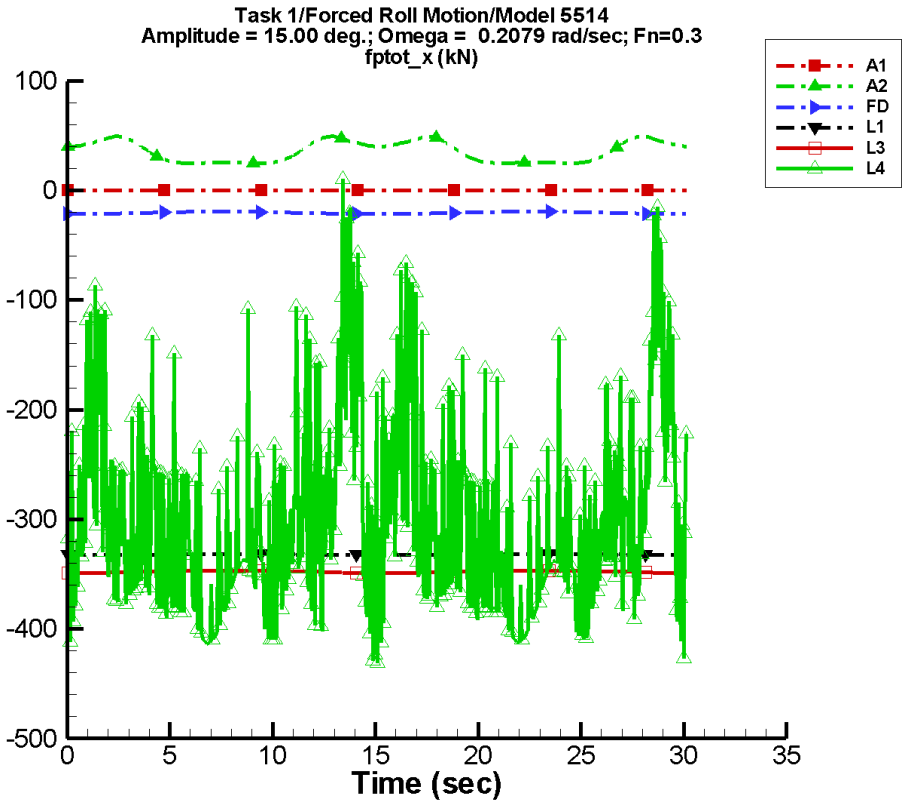
Figure D–46. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–91. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.51E-05 | 7.76E-03 | -167 | 9.30E-05 | 94 |
| A2 | 43.3 | 2.20E-03 | -137 | 2.86 | -92 |
| FD | -21.3 | 1.22E-03 | -168 | 2.19E-02 | -105 |
| L1 | -332. | 1.21E-02 | -158 | 5.32E-02 | -106 |
| L3 | -348. | 8.11E-03 | -159 | 0.128 | -97 |
| L4 | -321. | 1.90 | -64 | 4.40 | 102 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–92. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.10E-02 | 2.07E-02 | -1.03E-02 | 1.02E-02 |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | -332. | -332. | -332. | -332. |
| L3 | -348. | -348. | -348. | -348. |
| L4 | -388. | -102. | -377. | -276. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

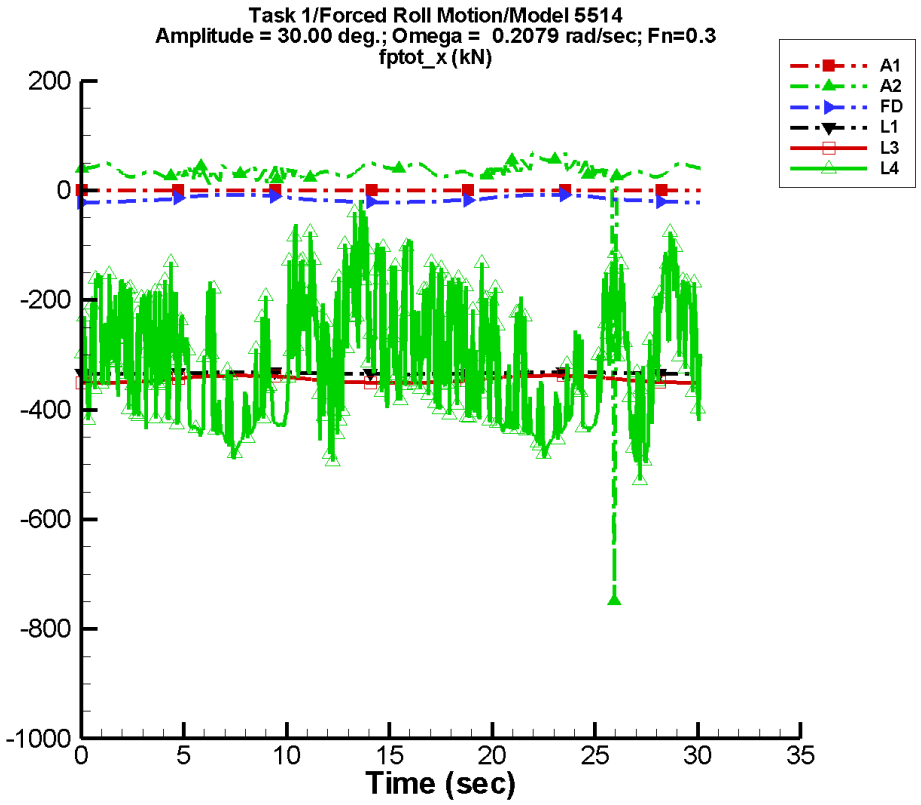
Figure D–47. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–93. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.52E-05 | 2.33E-02 | -167 | 2.79E-04 | 94 |
| A2 | 35.6 | 6.53E-02 | -79 | 11.7 | 87 |
| FD | -20.3 | 3.08E-03 | -169 | 1.12 | -91 |
| L1 | -332. | 1.23E-02 | -155 | 0.432 | -106 |
| L3 | -348. | 1.83E-02 | -88 | 1.10 | -97 |
| L4 | -300. | 3.29 | -50 | 55.6 | 96 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–94. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.29E-02 | 6.21E-02 | -3.09E-02 | 3.07E-02 |
| A2 | 24.8 | 49.4 | 24.9 | 48.9 |
| FD | -21.4 | -19.1 | -21.4 | -19.1 |
| L1 | -333. | -332. | -333. | -332. |
| L3 | -349. | -347. | -349. | -347. |
| L4 | -433. | 10.6 | -408. | -94.3 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

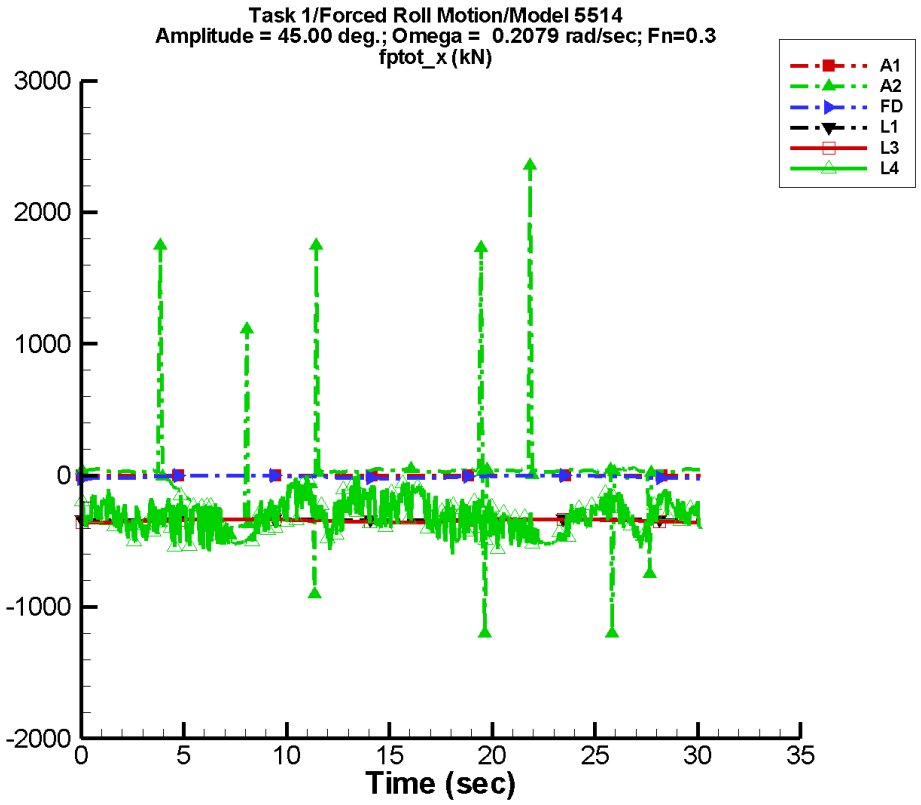
Figure D–48. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–95. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.04E-05 | 4.65E-02 | -167 | 5.58E-04 | 94 |
| A2 | 33.7 | 3.47 | -124 | 5.04 | 23 |
| FD | -15.6 | 2.05E-02 | -170 | 6.73 | -91 |
| L1 | -333. | 1.33E-02 | -150 | 1.71 | -106 |
| L3 | -345. | 5.85E-02 | 128 | 7.19 | -95 |
| L4 | -309. | 18.3 | -71 | 80.4 | 93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–96. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.126 | 0.124 | -6.17E-02 | 6.13E-02 |
| A2 | -748. | 69.2 | -77.3 | 58.7 |
| FD | -21.4 | -7.97 | -21.3 | -8.00 |
| L1 | -335. | -332. | -335. | -332. |
| L3 | -352. | -338. | -351. | -338. |
| L4 | -529. | -17.7 | -460. | -71.3 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

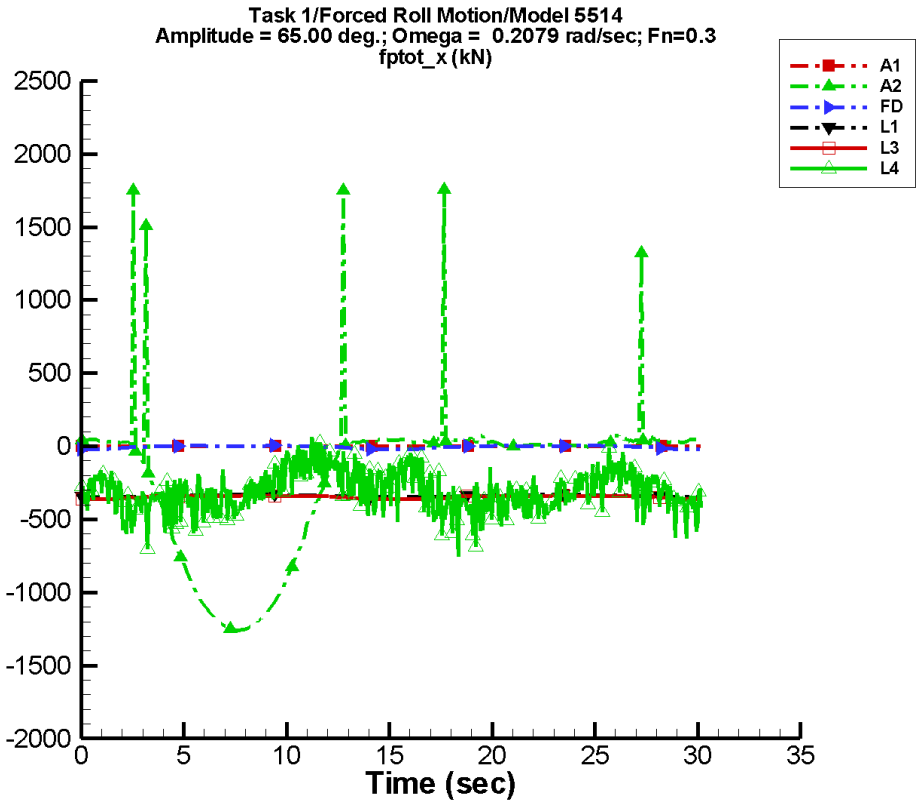
Figure D–49. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–97. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.36E-04 | 6.98E-02 | -167 | 8.37E-04 | 94 |
| A2 | -16.4 | 119. | -177 | 96.3 | 70 |
| FD | -9.65 | 2.29E-02 | 15 | 11.2 | -89 |
| L1 | -335. | 1.42E-02 | -147 | 3.83 | -106 |
| L3 | -343. | 3.42E-02 | -42 | 12.2 | -96 |
| L4 | -313. | 23.6 | -51 | 89.9 | 117 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–98. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.189 | 0.186 | -9.26E-02 | 9.20E-02 |
| A2 | -1.20E+03 | 2.36E+03 | -391. | 350. |
| FD | -21.4 | 0.541 | -21.4 | 0.514 |
| L1 | -339. | -331. | -339. | -332. |
| L3 | -356. | -331. | -356. | -332. |
| L4 | -597. | 11.8 | -517. | -58.1 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

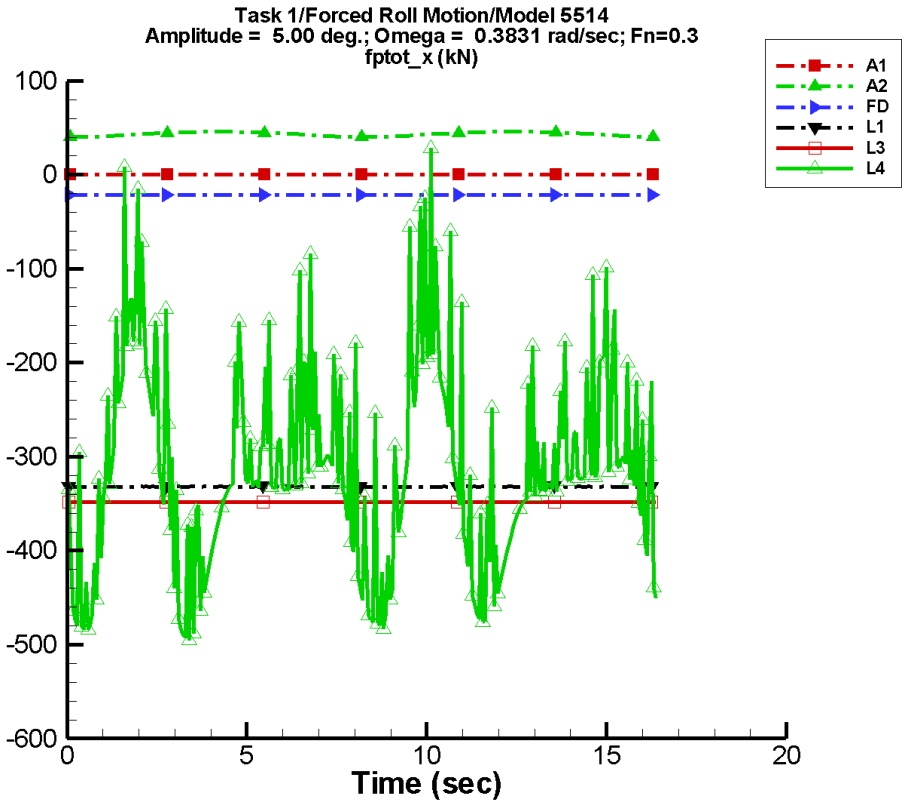
Figure D–50. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–99. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.96E-04 | 0.101 | -167 | 1.21E-03 | 94 |
| A2 | -212. | 475. | 177 | 402. | 84 |
| FD | -5.09 | 0.114 | 5 | 11.8 | -88 |
| L1 | -339. | 1.51E-02 | -142 | 7.99 | -106 |
| L3 | -347. | 0.383 | -62 | 11.7 | -102 |
| L4 | -304. | 46.5 | -62 | 108. | 163 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–100. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.272 | 0.269 | -0.134 | 0.133 |
| A2 | -1.26E+03 | 1.76E+03 | -1.26E+03 | 263. |
| FD | -21.4 | 4.06 | -21.3 | 3.87 |
| L1 | -347. | -331. | -347. | -331. |
| L3 | -364. | -337. | -363. | -337. |
| L4 | -761. | 129. | -482. | -33.1 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

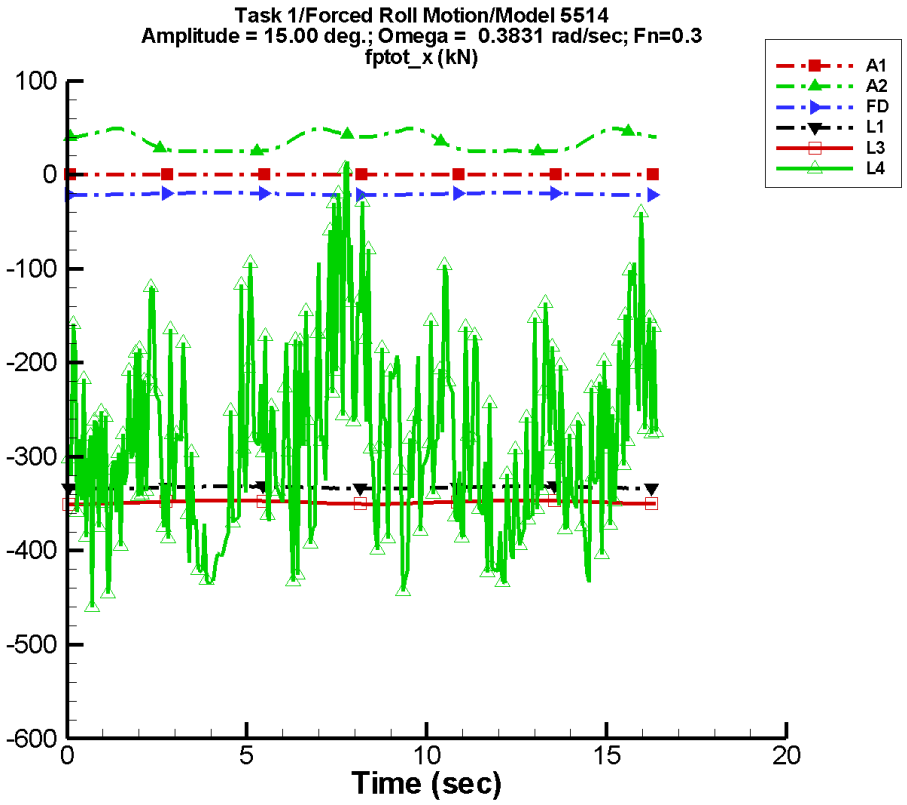
Figure D–51. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–101. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.41E-04 | 7.57E-03 | -173 | 1.41E-03 | 152 |
| A2 | 43.3 | 2.24E-03 | -176 | 2.86 | -94 |
| FD | -21.3 | 3.24E-03 | 116 | 2.61E-02 | -93 |
| L1 | -332. | 1.97E-03 | 124 | 0.131 | -110 |
| L3 | -348. | 4.40E-03 | 156 | 0.201 | -104 |
| L4 | -309. | 10.8 | -5 | 11.1 | 4 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–102. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.00E-02 | 1.70E-02 | -9.10E-03 | 7.50E-03 |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | -332. | -332. | -332. | -332. |
| L3 | -348. | -348. | -348. | -348. |
| L4 | -495. | 39.9 | -455. | -104. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

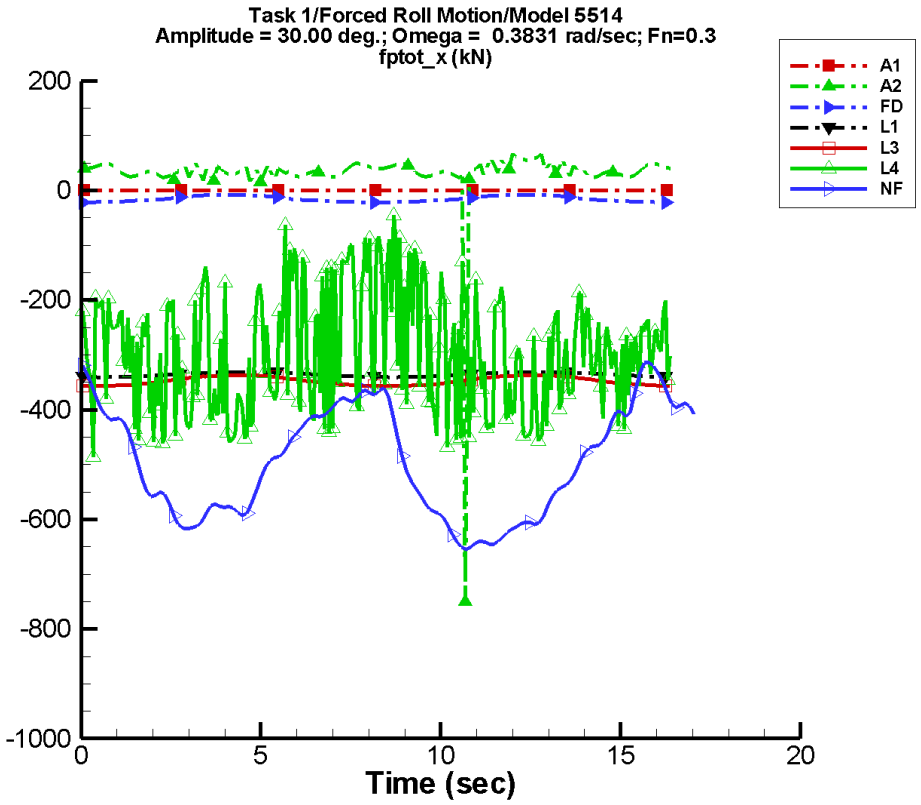
Figure D–52. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–103. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.22E-04 | 2.27E-02 | -173 | 4.23E-03 | 152 |
| A2 | 35.6 | 7.20E-02 | -70 | 11.7 | 85 |
| FD | -20.3 | 5.38E-03 | 123 | 1.13 | -90 |
| L1 | -333. | 8.40E-04 | -157 | 1.18 | -110 |
| L3 | -348. | 5.65E-03 | 22 | 1.87 | -103 |
| L4 | -286. | 21.4 | -89 | 52.1 | 105 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–104. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -5.98E-02 | 5.09E-02 | -2.73E-02 | 2.25E-02 |
| A2 | 24.9 | 49.4 | 25.0 | 47.9 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | -334. | -331. | -334. | -332. |
| L3 | -350. | -347. | -350. | -347. |
| L4 | -460. | 14.1 | -420. | -99.8 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NSHIPMO.

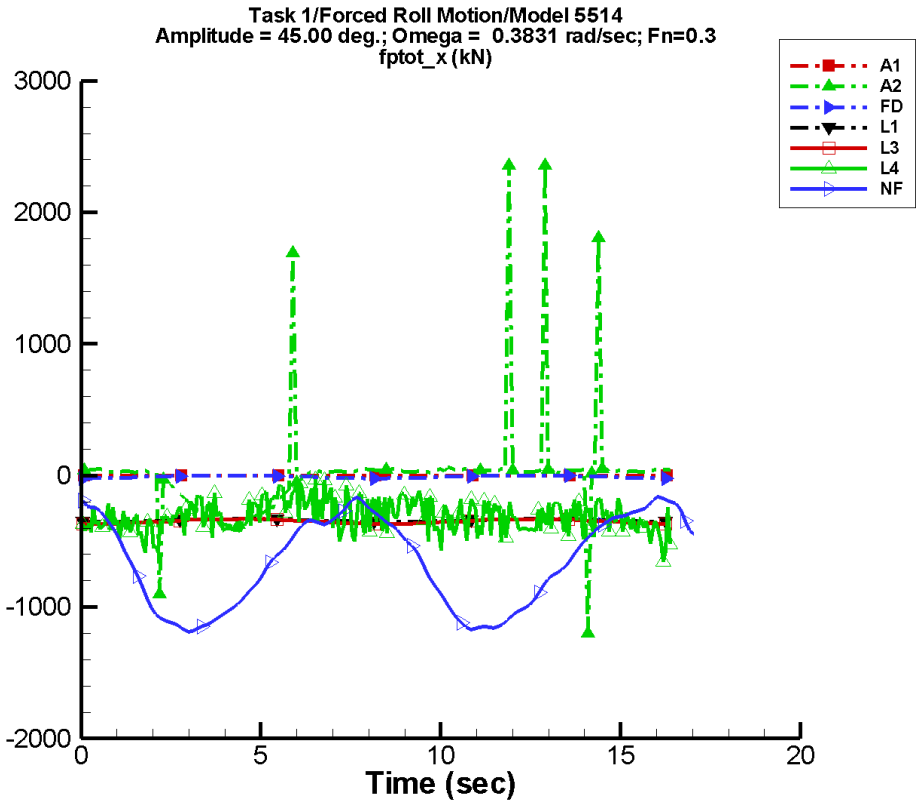
Figure D–53. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–105. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.44E-04 | 4.54E-02 | -173 | 8.46E-03 | 152 |
| A2 | 32.3 | 6.80 | 65 | 8.87 | 161 |
| FD | -15.6 | 6.56E-02 | 122 | 6.81 | -90 |
| L1 | -336. | 2.85E-03 | -123 | 4.73 | -110 |
| L3 | -348. | 4.34E-02 | -173 | 10.1 | -101 |
| L4 | -293. | 35.8 | -87 | 56.1 | 96 |
| NF | -499. | 30.4 | 90 | 129. | -164 |
| NS | — | — | — | — | — |

Table D–106. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.120 | 0.102 | -5.46E-02 | 4.50E-02 |
| A2 | -750. | 67.3 | -73.4 | 58.2 |
| FD | -21.4 | -7.97 | -21.3 | -8.09 |
| L1 | -341. | -331. | -341. | -331. |
| L3 | -357. | -337. | -357. | -337. |
| L4 | -486. | -45.6 | -421. | -163. |
| NF | -655. | -313. | -647. | -338. |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NSHIPMO.

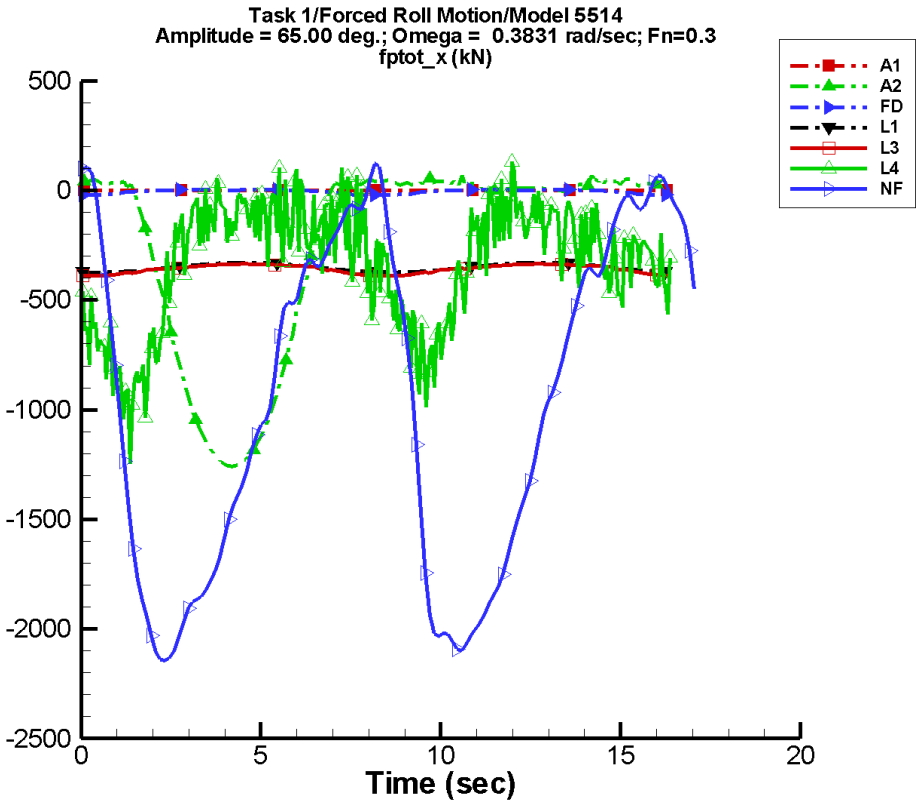
Figure D–54. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–107. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.27E-03 | 6.81E-02 | -173 | 1.27E-02 | 152 |
| A2 | 12.0 | 173. | 178 | 65.6 | 103 |
| FD | -9.60 | 0.109 | -60 | 11.1 | -90 |
| L1 | -341. | 5.38E-03 | -111 | 10.6 | -110 |
| L3 | -349. | 8.53E-02 | -17 | 19.0 | -102 |
| L4 | -314. | 70.1 | -79 | 45.0 | -168 |
| NF | -660. | 49.2 | 146 | 467. | -162 |
| NS | — | — | — | — | — |

Table D–108. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.179 | 0.153 | -8.19E-02 | 6.75E-02 |
| A2 | -1.20E+03 | 2.36E+03 | -373. | 332. |
| FD | -21.4 | 0.538 | -21.3 | 0.472 |
| L1 | -352. | -330. | -352. | -330. |
| L3 | -368. | -330. | -368. | -331. |
| L4 | -660. | -28.8 | -575. | -157. |
| NF | -1.19E+03 | -164. | -1.16E+03 | -205. |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NSHIPMO.

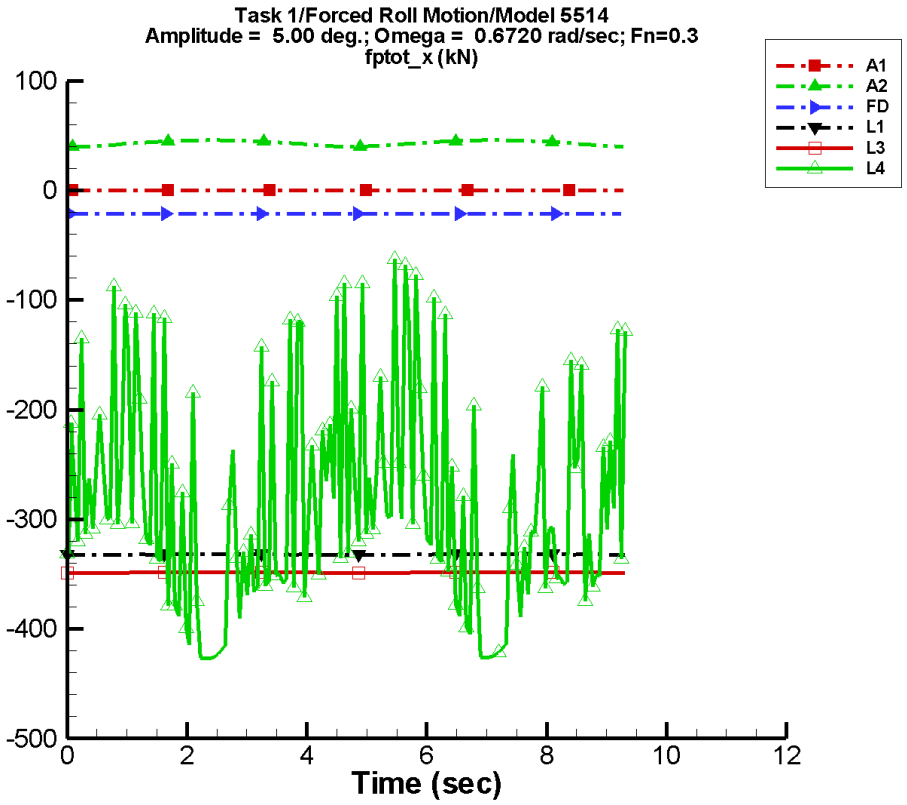
Figure D–55. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–109. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.83E-03 | 9.84E-02 | -173 | 1.83E-02 | 152 |
| A2 | -234. | 478. | 176 | 384. | 83 |
| FD | -5.02 | 0.207 | -61 | 11.5 | -89 |
| L1 | -351. | 8.97E-03 | -108 | 22.2 | -110 |
| L3 | -359. | 0.254 | -18 | 26.3 | -107 |
| L4 | -341. | 100. | -94 | 312. | -137 |
| NF | -971. | 127. | 178 | 1.02E+03 | -147 |
| NS | — | — | — | — | — |

Table D–110. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.259 | 0.221 | -0.118 | 9.74E-02 |
| A2 | -1.26E+03 | 70.3 | -1.25E+03 | 47.9 |
| FD | -21.4 | 4.05 | -21.2 | 3.38 |
| L1 | -373. | -329. | -373. | -329. |
| L3 | -389. | -335. | -389. | -335. |
| L4 | -1.25E+03 | 131. | -1.02E+03 | -61.4 |
| NF | -2.17E+03 | 125. | -2.08E+03 | 81.5 |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

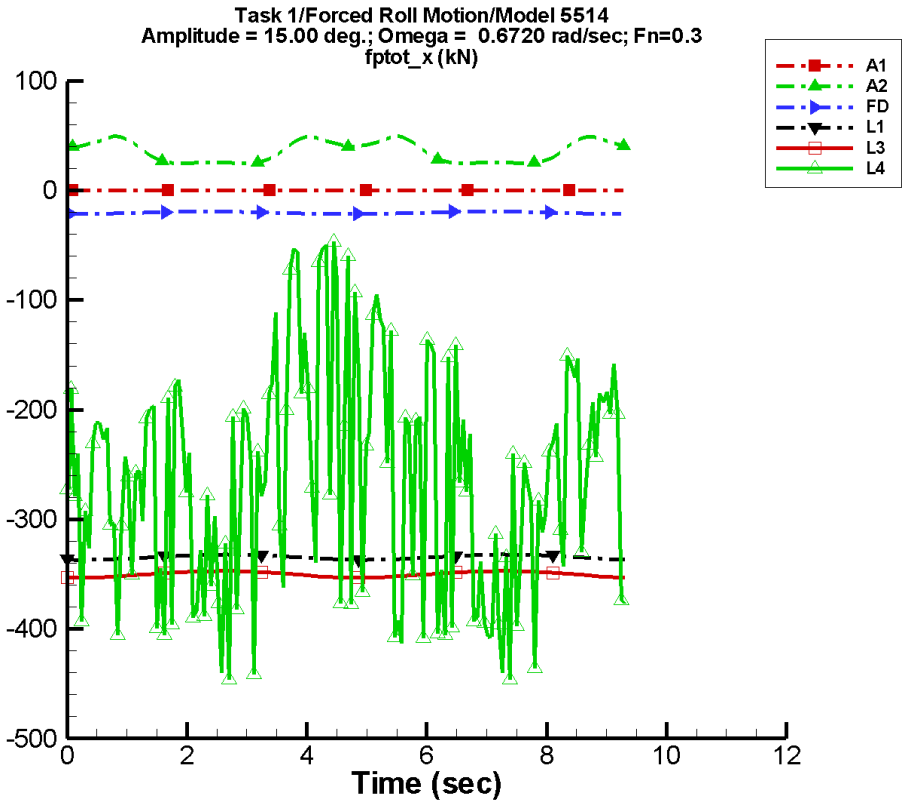
Figure D–56. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–111. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.65E-05 | 1.73E-02 | 140 | 3.73E-04 | 78 |
| A2 | 43.3 | 1.03E-02 | 50 | 2.88 | -97 |
| FD | -21.3 | 4.68E-03 | 147 | 2.49E-02 | -103 |
| L1 | -332. | 2.80E-03 | 173 | 0.266 | -112 |
| L3 | -348. | 5.26E-03 | -176 | 0.335 | -109 |
| L4 | -288. | 8.56 | -81 | 68.2 | 59 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–112. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.59E-02 | 1.96E-02 | -1.76E-02 | 1.73E-02 |
| A2 | 40.2 | 45.9 | 40.2 | 45.8 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | -332. | -332. | -332. | -332. |
| L3 | -349. | -348. | -349. | -348. |
| L4 | -427. | -62.6 | -404. | -192. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA and NSHIPMO.

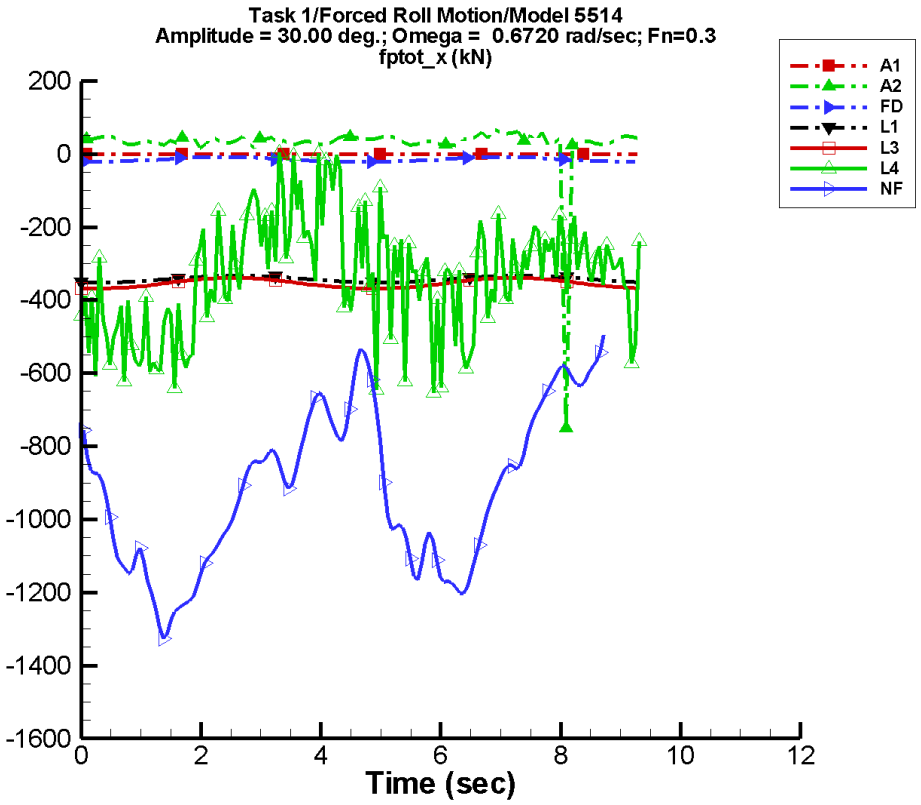
Figure D–57. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–113. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -7.96E-05 | 5.20E-02 | 140 | 1.12E-03 | 78 |
| A2 | 35.6 | 5.56E-02 | -97 | 11.7 | 81 |
| FD | -20.3 | 1.00E-02 | 152 | 1.13 | -91 |
| L1 | -334. | 5.17E-03 | -151 | 2.39 | -112 |
| L3 | -350. | 9.62E-03 | -13 | 3.07 | -108 |
| L4 | -263. | 34.0 | -73 | 58.8 | 105 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–114. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.78E-02 | 5.87E-02 | -5.29E-02 | 5.17E-02 |
| A2 | 24.9 | 49.4 | 25.0 | 46.0 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | -337. | -332. | -337. | -332. |
| L3 | -353. | -347. | -353. | -347. |
| L4 | -446. | -47.1 | -388. | -153. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NSHIPMO.

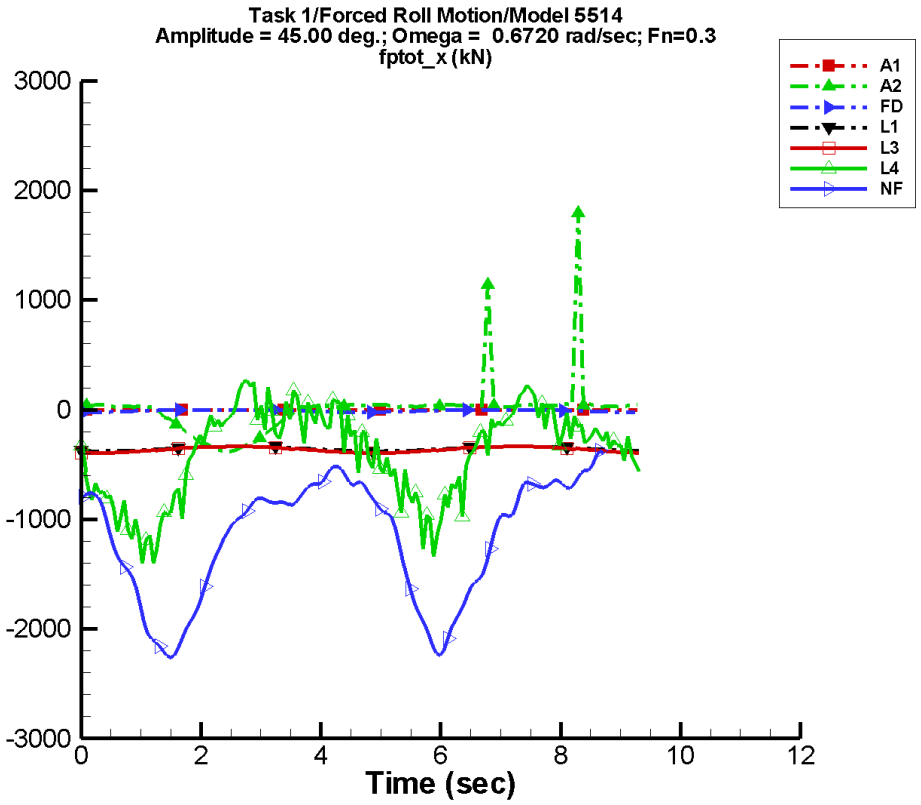
Figure D–58. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–115. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.59E-04 | 0.104 | 140 | 2.24E-03 | 78 |
| A2 | 28.5 | 12.6 | -57 | 15.1 | 12 |
| FD | -15.5 | 7.11E-02 | 150 | 6.78 | -91 |
| L1 | -343. | 1.00E-02 | -140 | 9.56 | -112 |
| L3 | -354. | 5.75E-02 | -174 | 14.9 | -106 |
| L4 | -333. | 77.5 | -88 | 136. | -179 |
| NF | -744. | 39.7 | -86 | 274. | 62 |
| NS | — | — | — | — | — |

Table D–116. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.156 | 0.117 | -0.106 | 0.103 |
| A2 | -749. | 66.5 | -71.5 | 62.9 |
| FD | -21.4 | -7.97 | -21.3 | -8.18 |
| L1 | -352. | -333. | -352. | -333. |
| L3 | -369. | -339. | -369. | -339. |
| L4 | -660. | 3.91 | -571. | -122. |
| NF | -1.20E+03 | -310. | -1.18E+03 | -394. |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NSHIPMO.

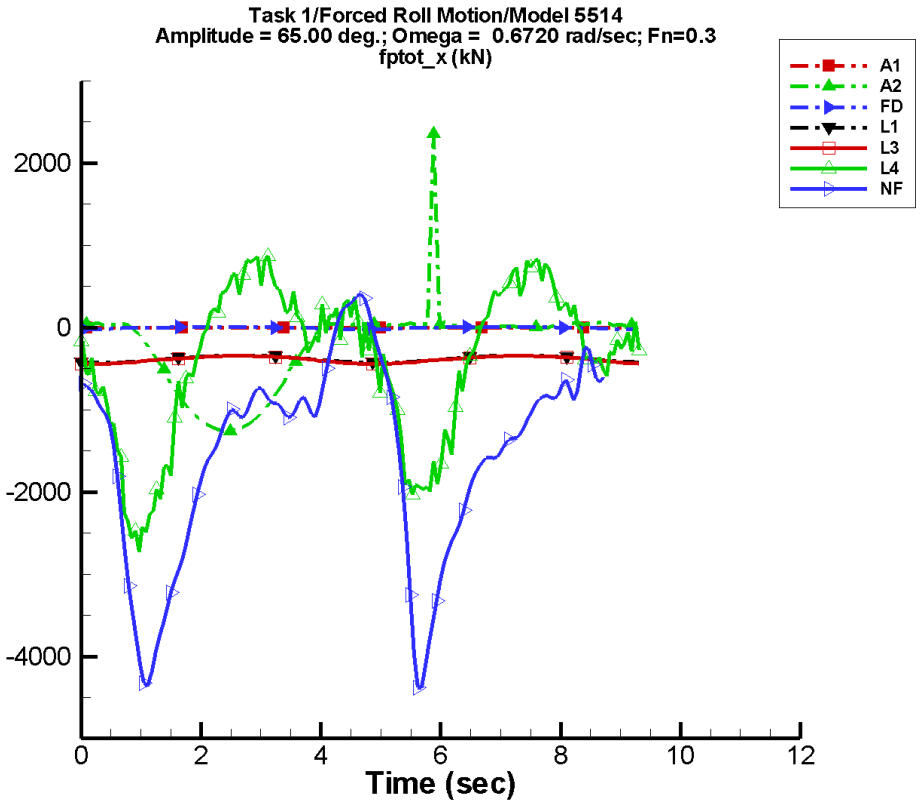
Figure D–59. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–117. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.39E-04 | 0.156 | 140 | 3.36E-03 | 78 |
| A2 | 5.47 | 169. | 166 | 79.8 | 93 |
| FD | -9.68 | 7.96E-02 | -31 | 11.2 | -89 |
| L1 | -356. | 1.56E-02 | -136 | 21.5 | -112 |
| L3 | -364. | 5.78E-02 | -135 | 29.8 | -107 |
| L4 | -402. | 124. | -100 | 518. | -162 |
| NF | -927. | 48.3 | -23 | 707. | 57 |
| NS | — | — | — | — | — |

Table D–118. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.233 | 0.176 | -0.159 | 0.155 |
| A2 | -383. | 1.79E+03 | -353. | 279. |
| FD | -21.4 | 0.537 | -21.2 | 0.365 |
| L1 | -378. | -335. | -378. | -335. |
| L3 | -394. | -335. | -394. | -335. |
| L4 | -1.49E+03 | 269. | -1.23E+03 | 138. |
| NF | -2.24E+03 | -155. | -2.11E+03 | -238. |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NSHIPMO.

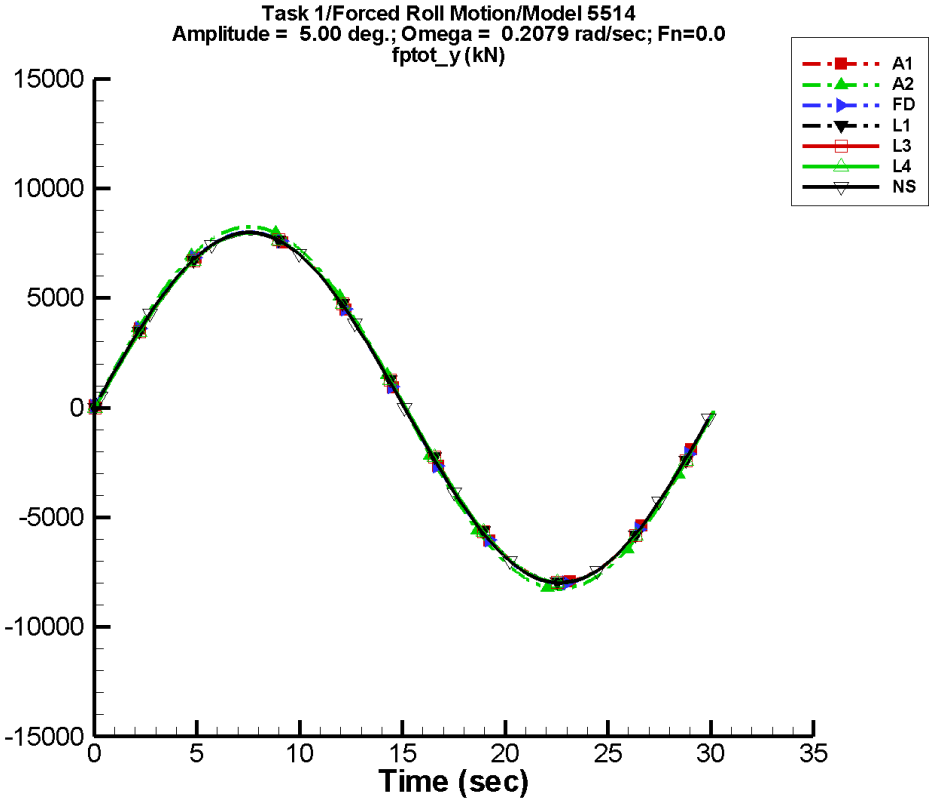
Figure D–60. Time history of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–119. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.45E-04 | 0.225 | 140 | 4.85E-03 | 78 |
| A2 | -203. | 502. | 179 | 379. | 72 |
| FD | -5.22 | 0.352 | -29 | 11.6 | -88 |
| L1 | -383. | 2.23E-02 | -135 | 44.9 | -112 |
| L3 | -390. | 0.314 | -2 | 49.0 | -110 |
| L4 | -398. | 222. | -117 | 1.14E+03 | -160 |
| NF | -1.33E+03 | 102. | -158 | 1.24E+03 | 61 |
| NS | — | — | — | — | — |

Table D–120. Minimum and maximum of of $F_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.337 | 0.254 | -0.229 | 0.224 |
| A2 | -1.26E+03 | 2.36E+03 | -1.22E+03 | 349. |
| FD | -21.4 | 4.06 | -20.8 | 2.74 |
| L1 | -428. | -338. | -427. | -339. |
| L3 | -444. | -344. | -444. | -345. |
| L4 | -2.73E+03 | 873. | -2.43E+03 | 744. |
| NF | -4.38E+03 | 360. | -3.81E+03 | 197. |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA.

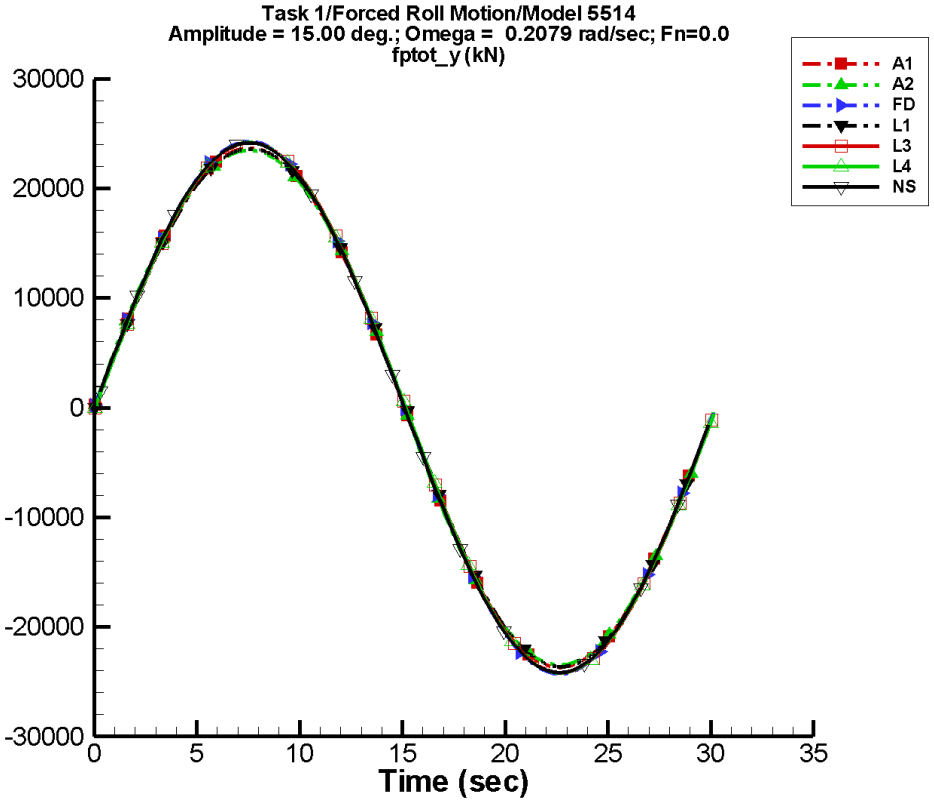
Figure D–61. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–121. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.100 | 7.98E+03 | 0 | 0.393 | 61 |
| A2 | 1.31 | 8.29E+03 | 0 | 6.91 | 64 |
| FD | -5.73E-03 | 8.01E+03 | 0 | 4.07E-02 | 160 |
| L1 | 0.151 | 7.96E+03 | -1 | 0.612 | 86 |
| L3 | -0.142 | 7.97E+03 | -1 | 0.528 | -92 |
| L4 | -0.248 | 7.97E+03 | -1 | 0.925 | -51 |
| NF | — | — | — | — | — |
| NS | 3.73E-03 | 7.99E+03 | 0 | 1.70E-03 | -164 |

Table D–122. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.97E+03 | 7.97E+03 | -7.97E+03 | 7.98E+03 |
| A2 | -8.26E+03 | 8.26E+03 | -8.25E+03 | 8.26E+03 |
| FD | -8.01E+03 | 8.01E+03 | -8.00E+03 | 8.00E+03 |
| L1 | -7.95E+03 | 7.95E+03 | -7.95E+03 | 7.95E+03 |
| L3 | -7.97E+03 | 7.97E+03 | -7.97E+03 | 7.97E+03 |
| L4 | -7.97E+03 | 7.97E+03 | -7.97E+03 | 7.97E+03 |
| NF | — | — | — | — |
| NS | -7.99E+03 | 7.99E+03 | -7.91E+03 | 7.91E+03 |




Data identically zero, insufficient, or not available from NFA.

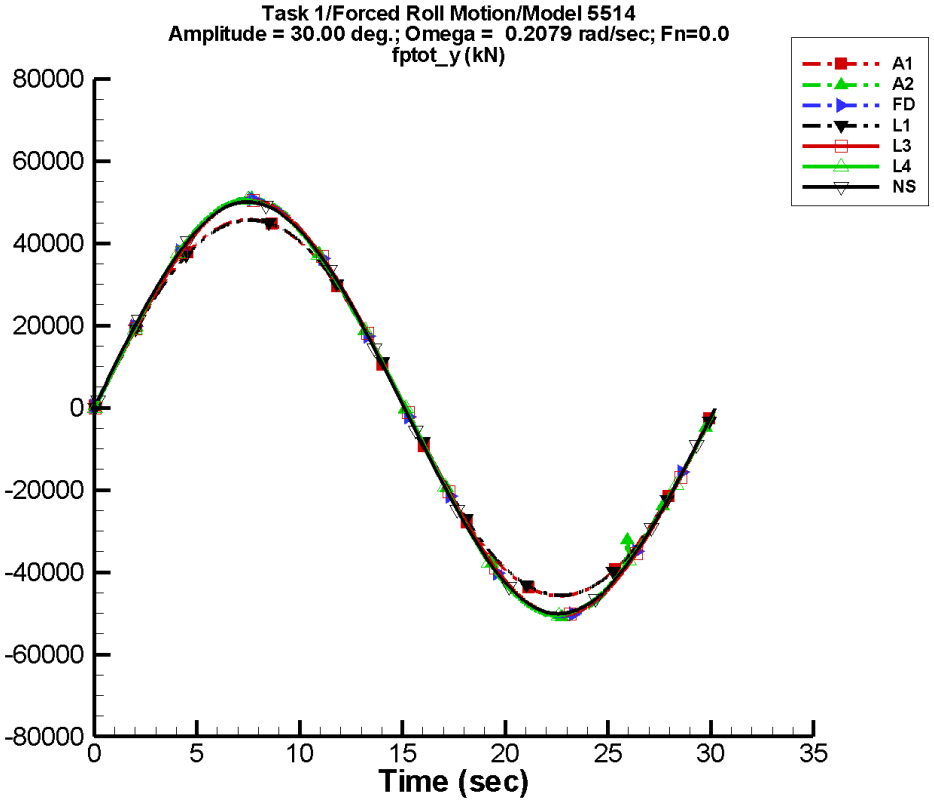
Figure D–62. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–123. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.82 | 2.37E+04 | 0 | 10.6 | 59 |
| A2 | 10.4 | 2.36E+04 | 0 | 50.8 | 67 |
| FD | -2.14 | 2.42E+04 | 0 | 10.8 | -124 |
| L1 | 4.16 | 2.37E+04 | -1 | 16.4 | 87 |
| L3 | -4.33 | 2.41E+04 | -1 | 17.1 | -93 |
| L4 | -7.33 | 2.41E+04 | -1 | 27.1 | -59 |
| NF | — | — | — | — | — |
| NS | 8.39E-02 | 2.41E+04 | 0 | 5.77E-02 | -110 |

Table D–124. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.37E+04 | 2.37E+04 | -2.36E+04 | 2.37E+04 |
| A2 | -2.35E+04 | 2.35E+04 | -2.35E+04 | 2.35E+04 |
| FD | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| L1 | -2.36E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| L3 | -2.42E+04 | 2.42E+04 | -2.42E+04 | 2.42E+04 |
| L4 | -2.42E+04 | 2.42E+04 | -2.42E+04 | 2.42E+04 |
| NF | — | — | — | — |
| NS | -2.42E+04 | 2.42E+04 | -2.39E+04 | 2.39E+04 |




Data identically zero, insufficient, or not available from NFA.

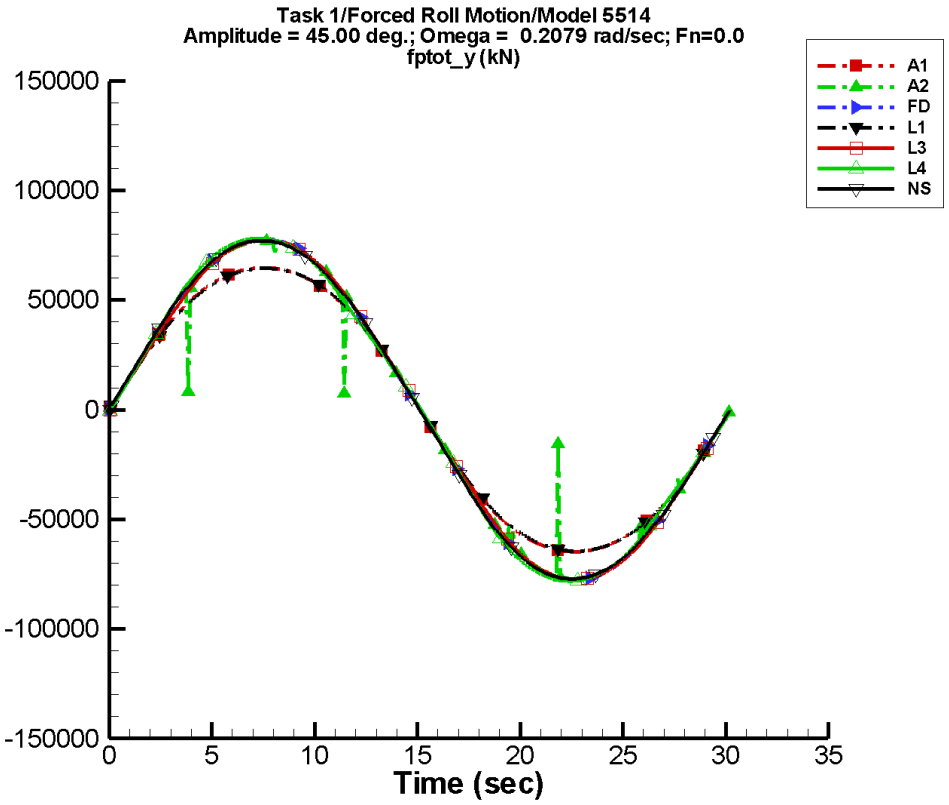
Figure D–63. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–125. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 13.8 | 4.63E+04 | 0 | 84.2 | 59 |
| A2 | -1.07 | 4.99E+04 | 0 | 202. | -135 |
| FD | -21.1 | 5.00E+04 | 0 | 107. | -123 |
| L1 | 32.8 | 4.62E+04 | -1 | 129. | 87 |
| L3 | -42.2 | 4.97E+04 | -1 | 167. | -93 |
| L4 | -70.2 | 4.98E+04 | 0 | 257. | -59 |
| NF | — | — | — | — | — |
| NS | 0.808 | 4.97E+04 | 0 | 0.610 | -108 |

Table D–126. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.58E+04 | 4.58E+04 | -4.57E+04 | 4.58E+04 |
| A2 | -5.09E+04 | 5.09E+04 | -5.09E+04 | 5.10E+04 |
| FD | -5.08E+04 | 5.08E+04 | -5.07E+04 | 5.07E+04 |
| L1 | -4.56E+04 | 4.56E+04 | -4.56E+04 | 4.56E+04 |
| L3 | -5.04E+04 | 5.04E+04 | -5.04E+04 | 5.04E+04 |
| L4 | -5.06E+04 | 5.06E+04 | -5.05E+04 | 5.05E+04 |
| NF | — | — | — | — |
| NS | -5.01E+04 | 5.01E+04 | -4.99E+04 | 4.99E+04 |




Data identically zero, insufficient, or not available from NFA.

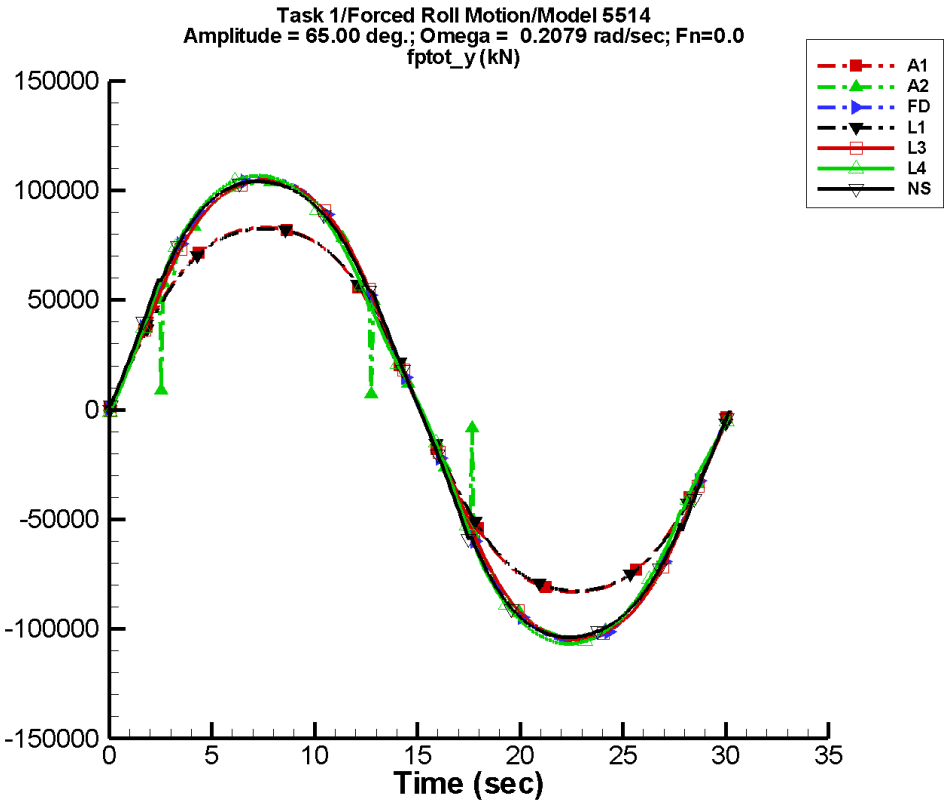
Figure D–64. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–127. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 45.2 | 6.65E+04 | 0 | 278. | 59 |
| A2 | 0.147 | 7.57E+04 | 0 | 563. | -72 |
| FD | -42.4 | 7.74E+04 | 0 | 204. | -112 |
| L1 | 108. | 6.63E+04 | -1 | 427. | 87 |
| L3 | -80.8 | 7.69E+04 | -1 | 309. | -94 |
| L4 | -199. | 7.73E+04 | 1 | 710. | -57 |
| NF | — | — | — | — | — |
| NS | 2.89 | 7.71E+04 | 0 | 1.95 | -111 |

Table D–128. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.47E+04 | 6.47E+04 | -6.47E+04 | 6.48E+04 |
| A2 | -7.71E+04 | 7.74E+04 | -7.77E+04 | 7.71E+04 |
| FD | -7.80E+04 | 7.80E+04 | -7.79E+04 | 7.79E+04 |
| L1 | -6.45E+04 | 6.45E+04 | -6.45E+04 | 6.45E+04 |
| L3 | -7.75E+04 | 7.75E+04 | -7.75E+04 | 7.75E+04 |
| L4 | -7.81E+04 | 7.81E+04 | -7.81E+04 | 7.81E+04 |
| NF | — | — | — | — |
| NS | -7.72E+04 | 7.71E+04 | -7.70E+04 | 7.70E+04 |




Data identically zero, insufficient, or not available from NFA.

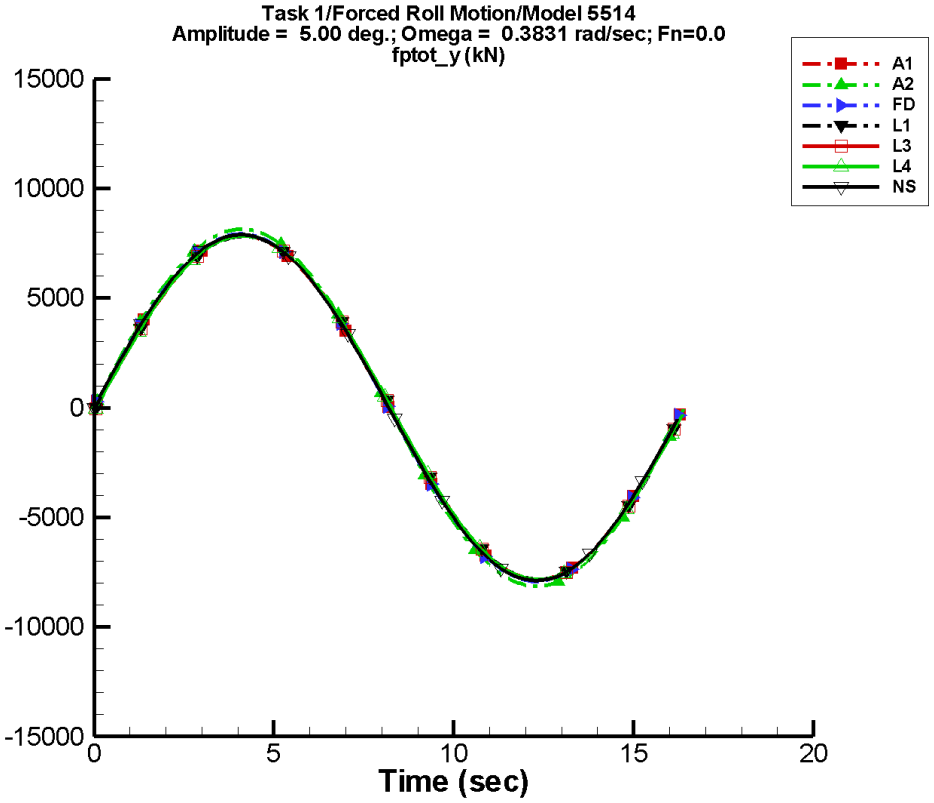
Figure D–65. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–129. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 131. | 8.80E+04 | 0 | 807. | 59 |
| A2 | -94.4 | 1.07E+05 | 0 | 486. | 4 |
| FD | 18.4 | 1.09E+05 | 0 | 221. | 25 |
| L1 | 314. | 8.77E+04 | -1 | 1.24E+03 | 87 |
| L3 | 81.8 | 1.08E+05 | -1 | 354. | 90 |
| L4 | -130. | 1.08E+05 | 1 | 546. | -28 |
| NF | — | — | — | — | — |
| NS | 97.4 | 1.08E+05 | 1 | 98.1 | -85 |

Table D–130. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.31E+04 | 8.31E+04 | -8.31E+04 | 8.32E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.05E+05 | 1.05E+05 |
| L1 | -8.26E+04 | 8.26E+04 | -8.26E+04 | 8.26E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |
| NF | — | — | — | — |
| NS | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |




Data identically zero, insufficient, or not available from NFA.

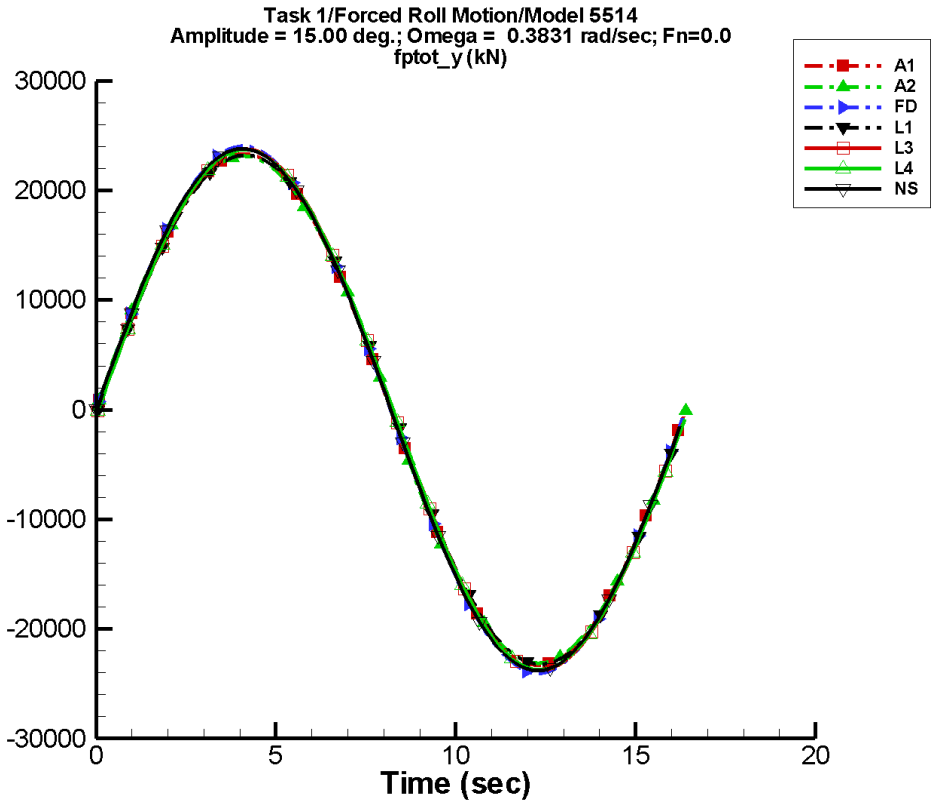
Figure D–66. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–131. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.205 | 7.86E+03 | 0 | 0.194 | 126 |
| A2 | 1.35 | 8.17E+03 | 0 | 6.62 | 61 |
| FD | -2.49E-02 | 7.92E+03 | 0 | 7.06E-02 | -65 |
| L1 | 0.198 | 7.82E+03 | -1 | 0.266 | 34 |
| L3 | -9.04E-02 | 7.84E+03 | -1 | 0.272 | -154 |
| L4 | -0.104 | 7.84E+03 | -1 | 0.687 | -16 |
| NF | — | — | — | — | — |
| NS | -5.66E-03 | 7.89E+03 | 0 | 1.71E-02 | -20 |

Table D–132. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.85E+03 | 7.86E+03 | -7.82E+03 | 7.88E+03 |
| A2 | -8.14E+03 | 8.15E+03 | -8.11E+03 | 8.17E+03 |
| FD | -7.92E+03 | 7.92E+03 | -7.89E+03 | 7.89E+03 |
| L1 | -7.82E+03 | 7.82E+03 | -7.81E+03 | 7.81E+03 |
| L3 | -7.84E+03 | 7.84E+03 | -7.83E+03 | 7.83E+03 |
| L4 | -7.84E+03 | 7.84E+03 | -7.83E+03 | 7.83E+03 |
| NF | — | — | — | — |
| NS | -7.89E+03 | 7.89E+03 | -7.81E+03 | 7.81E+03 |




Data identically zero, insufficient, or not available from NFA.

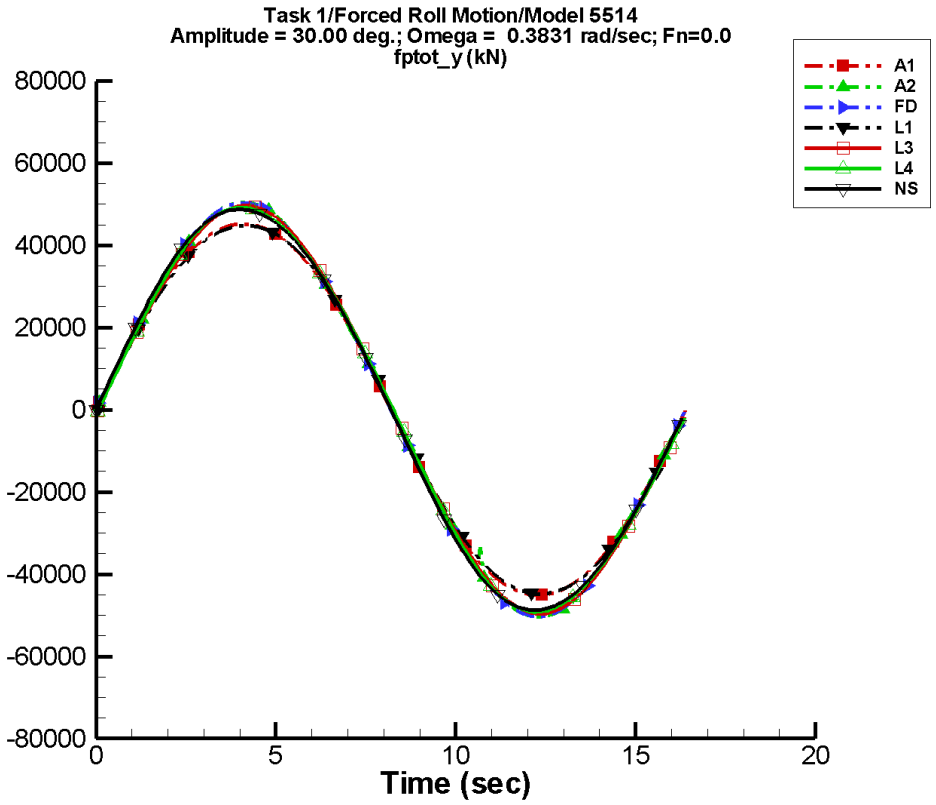
Figure D–67. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–133. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.80 | 2.34E+04 | 0 | 9.99 | 64 |
| A2 | 10.2 | 2.33E+04 | 0 | 50.7 | 66 |
| FD | -2.23 | 2.40E+04 | 0 | 15.2 | -104 |
| L1 | 4.26 | 2.33E+04 | -1 | 7.60 | 29 |
| L3 | -3.95 | 2.37E+04 | -1 | 8.02 | -153 |
| L4 | -4.64 | 2.37E+04 | -1 | 8.89 | -89 |
| NF | — | — | — | — | — |
| NS | -9.76E-02 | 2.38E+04 | 0 | 3.14E-02 | 78 |

Table D–134. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.33E+04 | 2.33E+04 | -2.32E+04 | 2.34E+04 |
| A2 | -2.31E+04 | 2.32E+04 | -2.30E+04 | 2.32E+04 |
| FD | -2.40E+04 | 2.40E+04 | -2.39E+04 | 2.39E+04 |
| L1 | -2.32E+04 | 2.32E+04 | -2.32E+04 | 2.32E+04 |
| L3 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.37E+04 |
| L4 | -2.37E+04 | 2.37E+04 | -2.37E+04 | 2.37E+04 |
| NF | — | — | — | — |
| NS | -2.38E+04 | 2.38E+04 | -2.36E+04 | 2.36E+04 |




Data identically zero, insufficient, or not available from NFA.

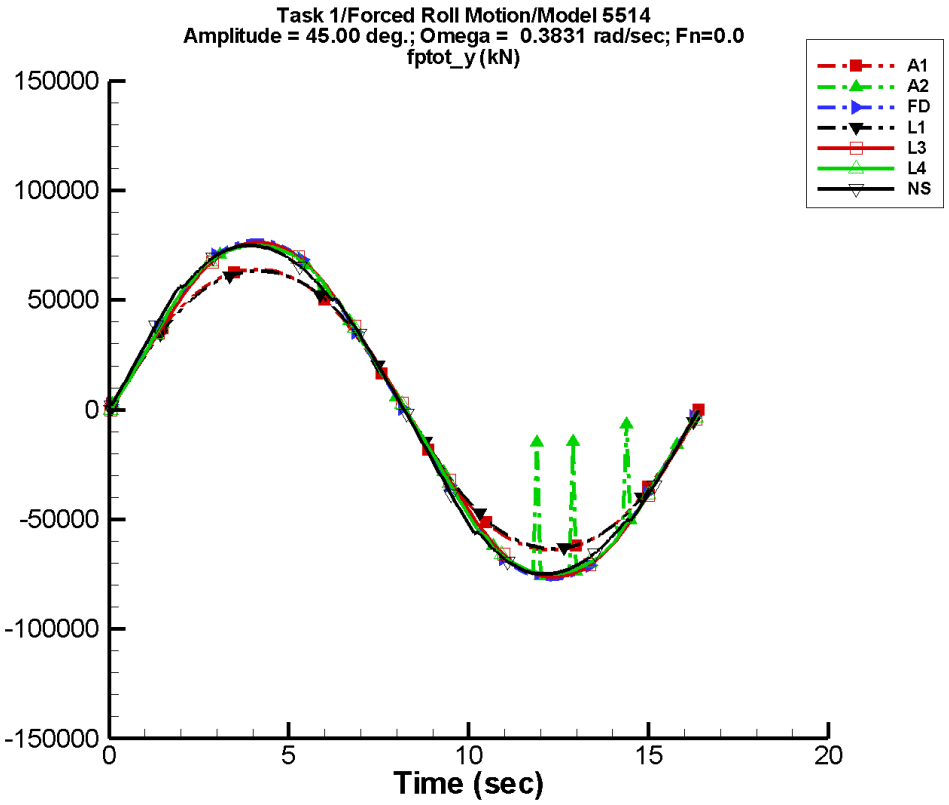
Figure D–68. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–135. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 11.5 | 4.56E+04 | 0 | 84.7 | 61 |
| A2 | 17.8 | 4.92E+04 | 0 | 168. | -107 |
| FD | -22.0 | 4.96E+04 | 0 | 150. | -104 |
| L1 | 32.3 | 4.54E+04 | -1 | 60.5 | 29 |
| L3 | -40.4 | 4.89E+04 | -1 | 78.2 | -153 |
| L4 | -48.2 | 4.87E+04 | -1 | 85.0 | -110 |
| NF | — | — | — | — | — |
| NS | -0.832 | 4.88E+04 | 0 | 0.694 | 130 |

Table D–136. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.51E+04 | 4.52E+04 | -4.50E+04 | 4.53E+04 |
| A2 | -5.03E+04 | 5.03E+04 | -5.01E+04 | 5.05E+04 |
| FD | -5.03E+04 | 5.03E+04 | -5.01E+04 | 5.01E+04 |
| L1 | -4.48E+04 | 4.48E+04 | -4.48E+04 | 4.48E+04 |
| L3 | -4.96E+04 | 4.96E+04 | -4.96E+04 | 4.96E+04 |
| L4 | -4.92E+04 | 4.92E+04 | -4.91E+04 | 4.91E+04 |
| NF | — | — | — | — |
| NS | -4.87E+04 | 4.87E+04 | -4.86E+04 | 4.86E+04 |




Data identically zero, insufficient, or not available from NFA.

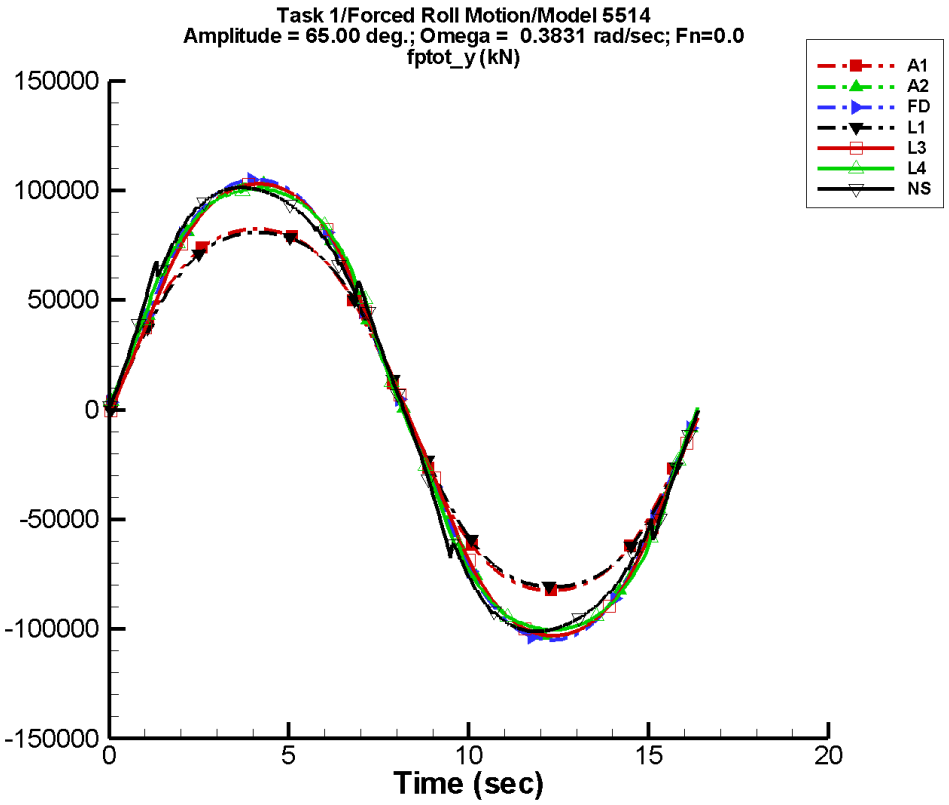
Figure D–69. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–137. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 36.6 | 6.56E+04 | 0 | 284. | 61 |
| A2 | 1.00E+03 | 7.39E+04 | 0 | 1.60E+03 | -114 |
| FD | -34.2 | 7.68E+04 | 0 | 267. | -108 |
| L1 | 106. | 6.52E+04 | -1 | 200. | 29 |
| L3 | -85.0 | 7.56E+04 | -1 | 164. | -145 |
| L4 | -55.9 | 7.55E+04 | -1 | 199. | -91 |
| NF | — | — | — | — | — |
| NS | -2.66 | 7.56E+04 | 1 | 2.40 | 138 |

Table D–138. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.40E+04 | 6.40E+04 | -6.38E+04 | 6.42E+04 |
| A2 | -7.63E+04 | 7.64E+04 | -7.12E+04 | 7.66E+04 |
| FD | -7.74E+04 | 7.74E+04 | -7.71E+04 | 7.71E+04 |
| L1 | -6.33E+04 | 6.33E+04 | -6.32E+04 | 6.32E+04 |
| L3 | -7.63E+04 | 7.63E+04 | -7.62E+04 | 7.62E+04 |
| L4 | -7.49E+04 | 7.49E+04 | -7.48E+04 | 7.48E+04 |
| NF | — | — | — | — |
| NS | -7.50E+04 | 7.50E+04 | -7.49E+04 | 7.49E+04 |




Data identically zero, insufficient, or not available from NFA.

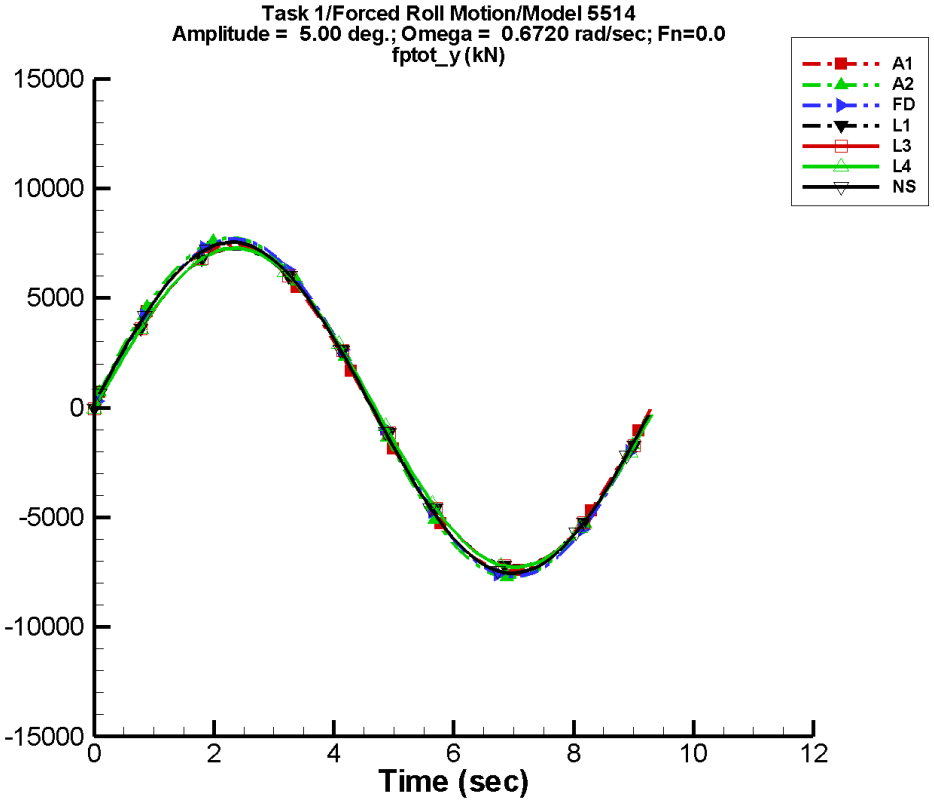
Figure D–70. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–139. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 105. | 8.71E+04 | 0 | 826. | 61 |
| A2 | -25.9 | 1.06E+05 | 0 | 279. | 47 |
| FD | 43.7 | 1.08E+05 | 0 | 280. | 84 |
| L1 | 306. | 8.62E+04 | -1 | 582. | 29 |
| L3 | 62.3 | 1.06E+05 | -1 | 169. | -14 |
| L4 | 299. | 1.07E+05 | 0 | 646. | 11 |
| NF | — | — | — | — | — |
| NS | 68.5 | 1.06E+05 | 2 | 47.8 | -70 |

Table D–140. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.24E+04 | 8.25E+04 | -8.23E+04 | 8.28E+04 |
| A2 | -1.03E+05 | 1.03E+05 | -1.03E+05 | 1.03E+05 |
| FD | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L1 | -8.09E+04 | 8.09E+04 | -8.08E+04 | 8.08E+04 |
| L3 | -1.03E+05 | 1.03E+05 | -1.03E+05 | 1.03E+05 |
| L4 | -1.01E+05 | 1.01E+05 | -1.00E+05 | 1.00E+05 |
| NF | — | — | — | — |
| NS | -1.01E+05 | 1.01E+05 | -1.01E+05 | 1.01E+05 |




Data identically zero, insufficient, or not available from NFA.

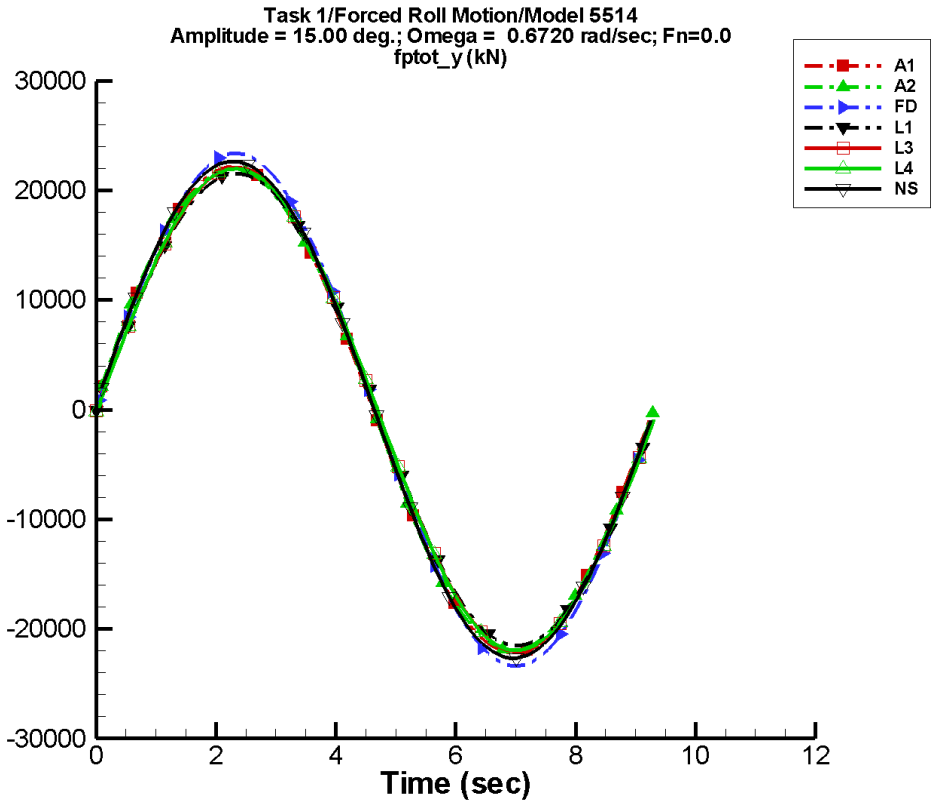
Figure D–71. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–141. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.138 | 7.46E+03 | 2 | 1.16 | 57 |
| A2 | 1.95 | 7.77E+03 | 2 | 5.95 | 44 |
| FD | -6.30E-02 | 7.70E+03 | 0 | 7.49E-02 | -6 |
| L1 | 0.316 | 7.26E+03 | -1 | 0.285 | 26 |
| L3 | 2.59E-02 | 7.27E+03 | -1 | 0.265 | -152 |
| L4 | -4.61E-02 | 7.29E+03 | -1 | 3.52 | 17 |
| NF | — | — | — | — | — |
| NS | 0.273 | 7.55E+03 | 1 | 0.294 | -21 |

Table D–142. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.45E+03 | 7.45E+03 | -7.37E+03 | 7.37E+03 |
| A2 | -7.74E+03 | 7.74E+03 | -7.65E+03 | 7.65E+03 |
| FD | -7.70E+03 | 7.70E+03 | -7.66E+03 | 7.61E+03 |
| L1 | -7.26E+03 | 7.26E+03 | -7.23E+03 | 7.23E+03 |
| L3 | -7.27E+03 | 7.27E+03 | -7.24E+03 | 7.24E+03 |
| L4 | -7.27E+03 | 7.27E+03 | -7.24E+03 | 7.25E+03 |
| NF | — | — | — | — |
| NS | -7.54E+03 | 7.55E+03 | -7.47E+03 | 7.47E+03 |




Data identically zero, insufficient, or not available from NFA.

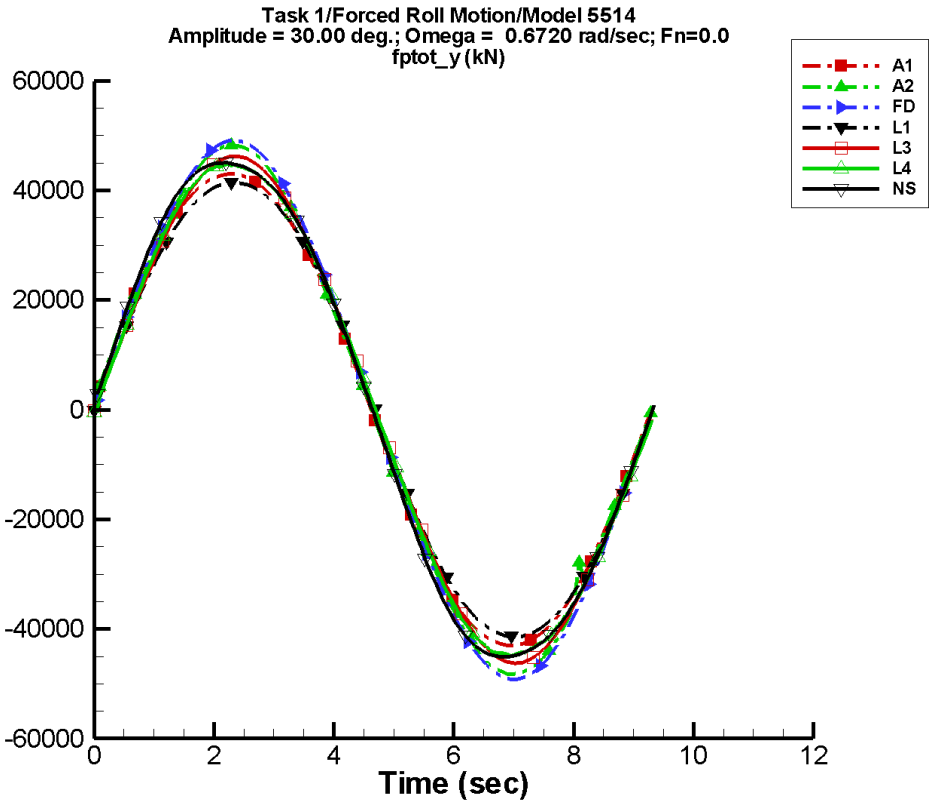
Figure D–72. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–143. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.91 | 2.22E+04 | 2 | 9.34 | 54 |
| A2 | 13.6 | 2.21E+04 | 2 | 43.0 | 55 |
| FD | -6.22 | 2.33E+04 | 0 | 11.5 | -34 |
| L1 | 4.65 | 2.16E+04 | 0 | 7.85 | 25 |
| L3 | -3.83 | 2.20E+04 | -1 | 8.25 | -157 |
| L4 | 3.75 | 2.20E+04 | -1 | 23.3 | -40 |
| NF | — | — | — | — | — |
| NS | 0.490 | 2.27E+04 | 1 | 0.786 | -4 |

Table D–144. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.22E+04 | 2.22E+04 | -2.19E+04 | 2.19E+04 |
| A2 | -2.20E+04 | 2.20E+04 | -2.17E+04 | 2.17E+04 |
| FD | -2.34E+04 | 2.34E+04 | -2.33E+04 | 2.31E+04 |
| L1 | -2.15E+04 | 2.15E+04 | -2.14E+04 | 2.14E+04 |
| L3 | -2.21E+04 | 2.21E+04 | -2.20E+04 | 2.20E+04 |
| L4 | -2.19E+04 | 2.20E+04 | -2.19E+04 | 2.19E+04 |
| NF | — | — | — | — |
| NS | -2.27E+04 | 2.27E+04 | -2.24E+04 | 2.24E+04 |




Data identically zero, insufficient, or not available from NFA.

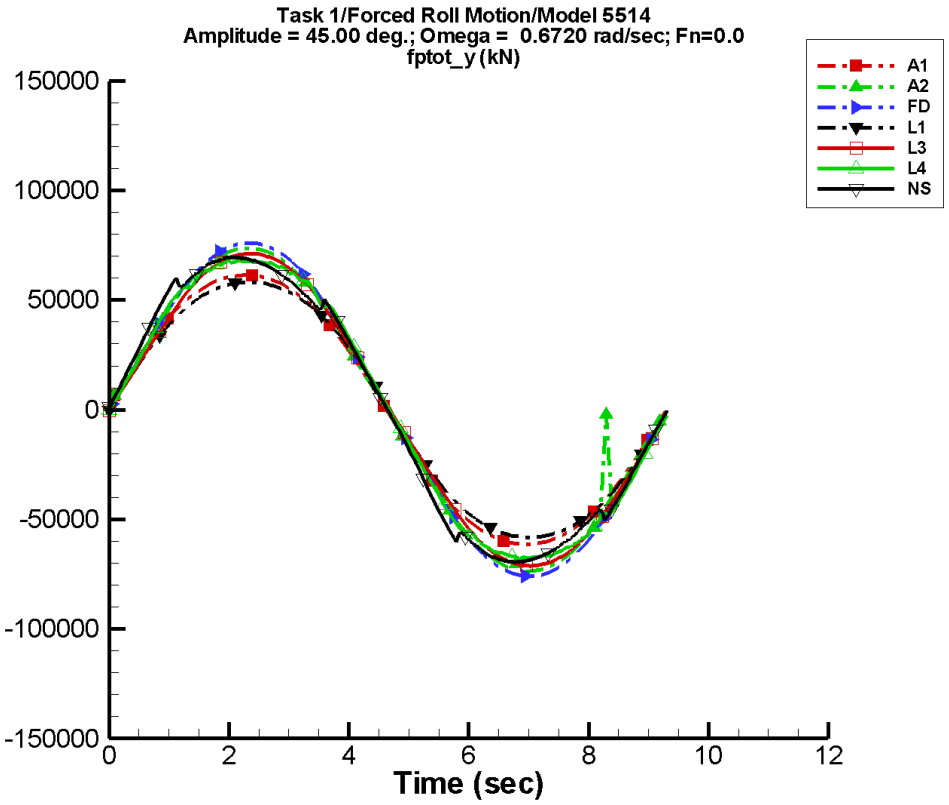
Figure D–73. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–145. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 19.3 | 4.35E+04 | 2 | 57.7 | 53 |
| A2 | 8.67 | 4.69E+04 | 2 | 268. | -165 |
| FD | -59.8 | 4.84E+04 | 0 | 112. | -34 |
| L1 | 33.8 | 4.20E+04 | 0 | 62.1 | 25 |
| L3 | -41.3 | 4.55E+04 | -1 | 80.5 | -157 |
| L4 | -19.2 | 4.50E+04 | 0 | 114. | -52 |
| NF | — | — | — | — | — |
| NS | -1.92 | 4.62E+04 | 2 | 2.77 | 56 |

Table D–146. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.30E+04 | 4.30E+04 | -4.26E+04 | 4.26E+04 |
| A2 | -4.82E+04 | 4.82E+04 | -4.77E+04 | 4.76E+04 |
| FD | -4.92E+04 | 4.92E+04 | -4.88E+04 | 4.85E+04 |
| L1 | -4.14E+04 | 4.14E+04 | -4.13E+04 | 4.13E+04 |
| L3 | -4.62E+04 | 4.63E+04 | -4.60E+04 | 4.60E+04 |
| L4 | -4.49E+04 | 4.48E+04 | -4.45E+04 | 4.45E+04 |
| NF | — | — | — | — |
| NS | -4.51E+04 | 4.51E+04 | -4.50E+04 | 4.50E+04 |




Data identically zero, insufficient, or not available from NFA.

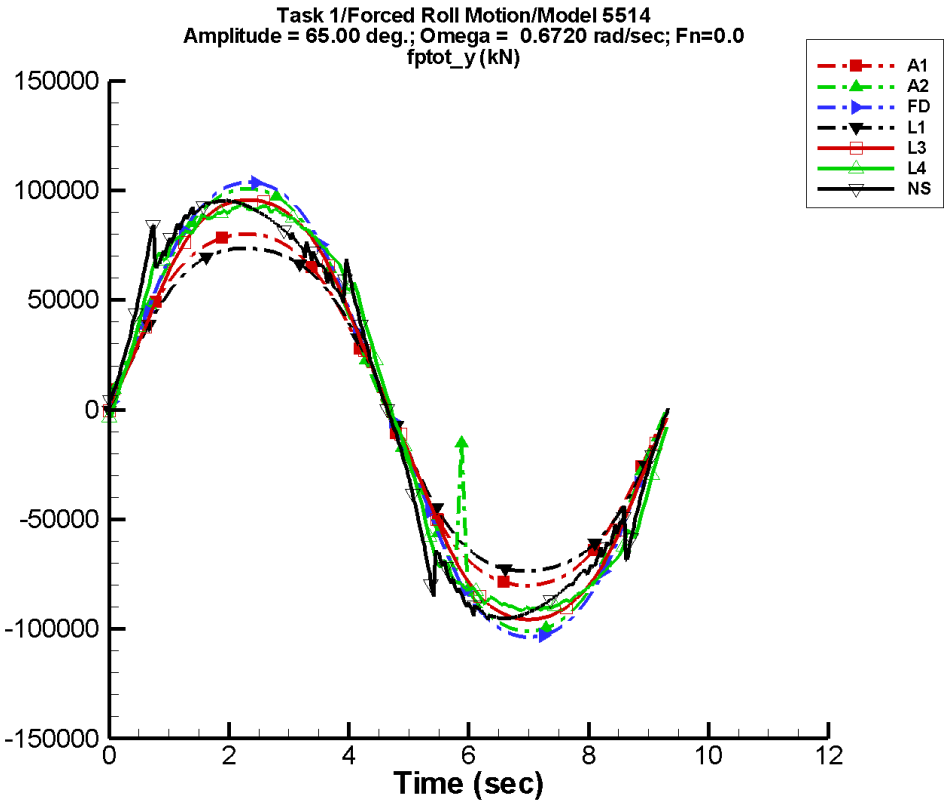
Figure D–74. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–147. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 66.5 | 6.29E+04 | 2 | 182. | 53 |
| A2 | 430. | 7.22E+04 | 2 | 1.02E+03 | -172 |
| FD | -104. | 7.53E+04 | 0 | 213. | -46 |
| L1 | 110. | 6.01E+04 | 0 | 206. | 25 |
| L3 | -72.2 | 7.05E+04 | -1 | 157. | -137 |
| L4 | 197. | 7.07E+04 | 0 | 420. | -35 |
| NF | — | — | — | — | — |
| NS | -9.64 | 7.13E+04 | 3 | 6.96 | 53 |

Table D–148. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.14E+04 | 6.14E+04 | -6.08E+04 | 6.08E+04 |
| A2 | -7.37E+04 | 7.37E+04 | -7.25E+04 | 7.28E+04 |
| FD | -7.60E+04 | 7.60E+04 | -7.56E+04 | 7.51E+04 |
| L1 | -5.82E+04 | 5.82E+04 | -5.80E+04 | 5.80E+04 |
| L3 | -7.12E+04 | 7.12E+04 | -7.09E+04 | 7.09E+04 |
| L4 | -6.82E+04 | 6.81E+04 | -6.74E+04 | 6.76E+04 |
| NF | — | — | — | — |
| NS | -6.95E+04 | 6.95E+04 | -6.94E+04 | 6.94E+04 |




Data identically zero, insufficient, or not available from NFA.

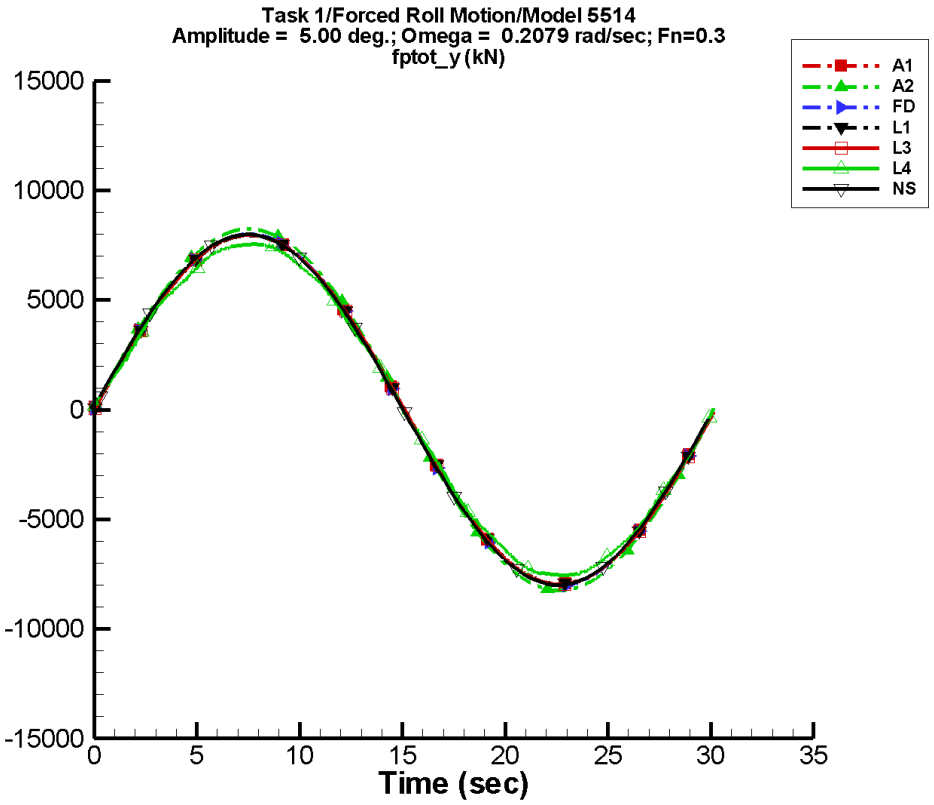
Figure D–75. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–149. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 197. | 8.45E+04 | 2 | 519. | 53 |
| A2 | 641. | 1.02E+05 | 1 | 1.34E+03 | -2 |
| FD | 80.6 | 1.06E+05 | 0 | 181. | -171 |
| L1 | 315. | 7.89E+04 | 0 | 595. | 26 |
| L3 | 97.8 | 9.89E+04 | -1 | 248. | -22 |
| L4 | 801. | 1.02E+05 | 0 | 1.32E+03 | -1 |
| NF | — | — | — | — | — |
| NS | 25.5 | 1.01E+05 | 4 | 47.8 | -9 |

Table D–150. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+04 | 8.02E+04 | -7.97E+04 | 7.97E+04 |
| A2 | -1.01E+05 | 1.01E+05 | -1.01E+05 | 1.00E+05 |
| FD | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.03E+05 |
| L1 | -7.36E+04 | 7.36E+04 | -7.34E+04 | 7.34E+04 |
| L3 | -9.57E+04 | 9.57E+04 | -9.55E+04 | 9.55E+04 |
| L4 | -9.15E+04 | 9.45E+04 | -9.09E+04 | 9.22E+04 |
| NF | — | — | — | — |
| NS | -9.61E+04 | 9.55E+04 | -9.53E+04 | 9.55E+04 |




Data identically zero, insufficient, or not available from NFA.

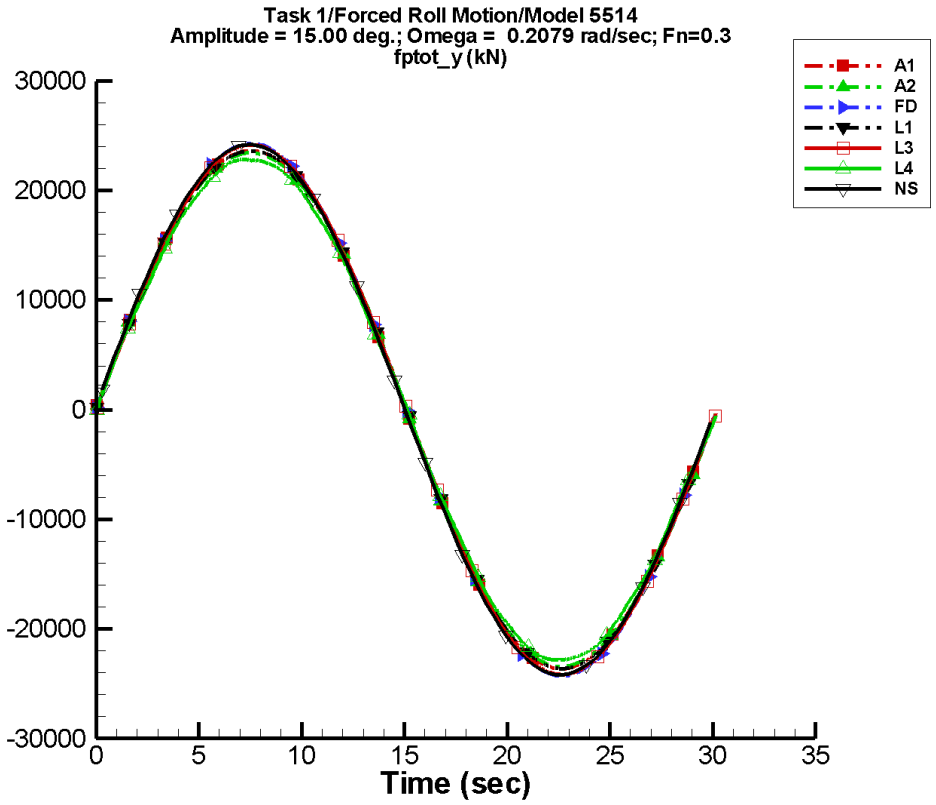
Figure D–76. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–151. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.108 | 7.96E+03 | 0 | 0.379 | 70 |
| A2 | 1.35 | 8.27E+03 | 0 | 6.71 | 62 |
| FD | -5.82E-03 | 8.01E+03 | 0 | 4.08E-02 | 160 |
| L1 | 0.119 | 7.95E+03 | 0 | 0.609 | 87 |
| L3 | -0.187 | 7.97E+03 | 0 | 0.531 | -93 |
| L4 | -4.88 | 7.57E+03 | 0 | 2.10 | 136 |
| NF | — | — | — | — | — |
| NS | 4.93E-03 | 7.99E+03 | 1 | 2.50E-03 | 171 |

Table D–152. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.96E+03 | 7.96E+03 | -7.95E+03 | 7.96E+03 |
| A2 | -8.25E+03 | 8.24E+03 | -8.24E+03 | 8.25E+03 |
| FD | -8.01E+03 | 8.01E+03 | -8.00E+03 | 8.00E+03 |
| L1 | -7.95E+03 | 7.95E+03 | -7.95E+03 | 7.95E+03 |
| L3 | -7.97E+03 | 7.97E+03 | -7.97E+03 | 7.97E+03 |
| L4 | -7.54E+03 | 7.55E+03 | -7.54E+03 | 7.55E+03 |
| NF | — | — | — | — |
| NS | -7.99E+03 | 7.99E+03 | -7.91E+03 | 7.91E+03 |




Data identically zero, insufficient, or not available from NFA.

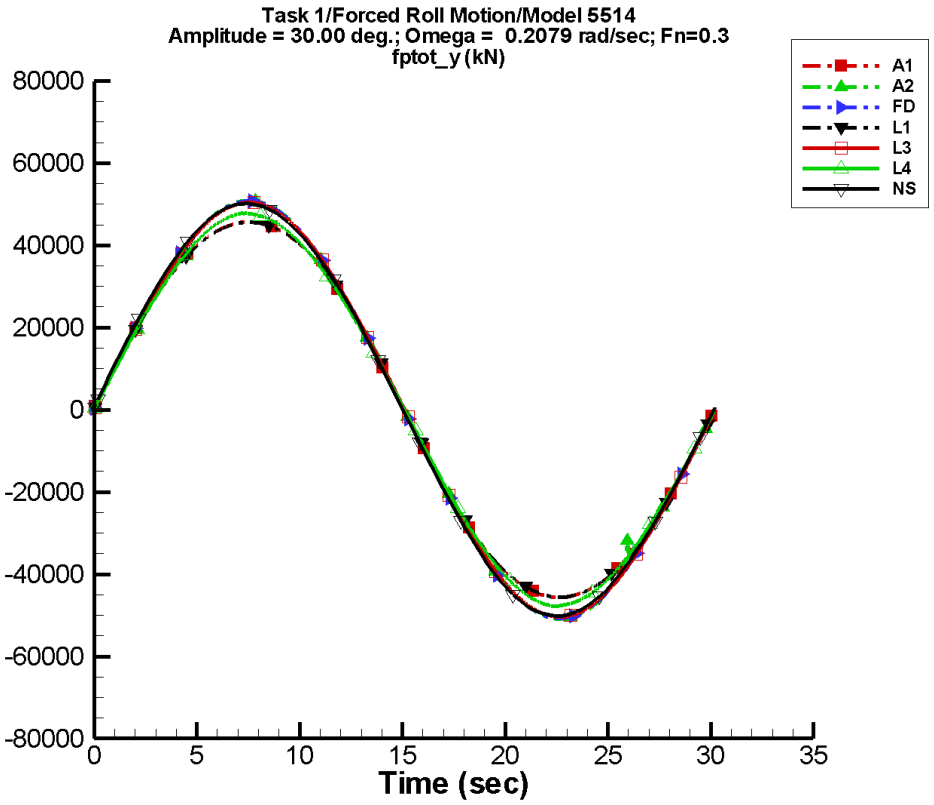
Figure D–77. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–153. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.83 | 2.37E+04 | 0 | 10.6 | 61 |
| A2 | 10.4 | 2.36E+04 | 0 | 50.8 | 67 |
| FD | -2.14 | 2.42E+04 | 0 | 10.8 | -124 |
| L1 | 4.12 | 2.37E+04 | 0 | 16.4 | 87 |
| L3 | -4.38 | 2.41E+04 | 0 | 17.1 | -93 |
| L4 | -12.7 | 2.29E+04 | 0 | 12.3 | -51 |
| NF | — | — | — | — | — |
| NS | 6.05E-02 | 2.41E+04 | 1 | 5.02E-02 | -140 |

Table D–154. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.36E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| A2 | -2.34E+04 | 2.34E+04 | -2.34E+04 | 2.34E+04 |
| FD | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| L1 | -2.36E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| L3 | -2.42E+04 | 2.42E+04 | -2.41E+04 | 2.41E+04 |
| L4 | -2.28E+04 | 2.28E+04 | -2.28E+04 | 2.28E+04 |
| NF | — | — | — | — |
| NS | -2.42E+04 | 2.42E+04 | -2.39E+04 | 2.39E+04 |




Data identically zero, insufficient, or not available from NFA.

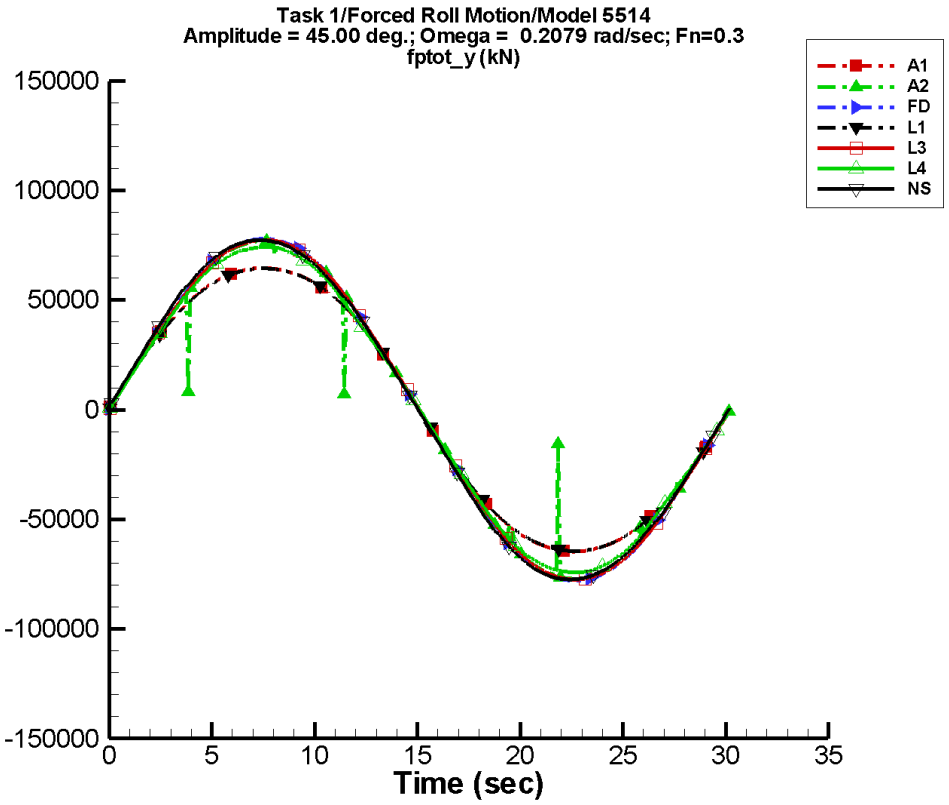
Figure D–78. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–155. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 13.7 | 4.62E+04 | 0 | 83.9 | 60 |
| A2 | -1.16 | 4.98E+04 | 0 | 203. | -136 |
| FD | -21.1 | 5.00E+04 | 0 | 107. | -123 |
| L1 | 32.7 | 4.61E+04 | 0 | 129. | 87 |
| L3 | -42.3 | 4.97E+04 | 0 | 167. | -93 |
| L4 | -50.9 | 4.71E+04 | 0 | 144. | -70 |
| NF | — | — | — | — | — |
| NS | 0.692 | 4.97E+04 | 1 | 0.611 | -129 |

Table D–156. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.57E+04 | 4.57E+04 | -4.56E+04 | 4.57E+04 |
| A2 | -5.09E+04 | 5.09E+04 | -5.08E+04 | 5.09E+04 |
| FD | -5.08E+04 | 5.08E+04 | -5.07E+04 | 5.07E+04 |
| L1 | -4.56E+04 | 4.56E+04 | -4.56E+04 | 4.56E+04 |
| L3 | -5.04E+04 | 5.04E+04 | -5.04E+04 | 5.04E+04 |
| L4 | -4.79E+04 | 4.78E+04 | -4.78E+04 | 4.77E+04 |
| NF | — | — | — | — |
| NS | -5.02E+04 | 5.02E+04 | -5.00E+04 | 5.00E+04 |




Data identically zero, insufficient, or not available from NFA.

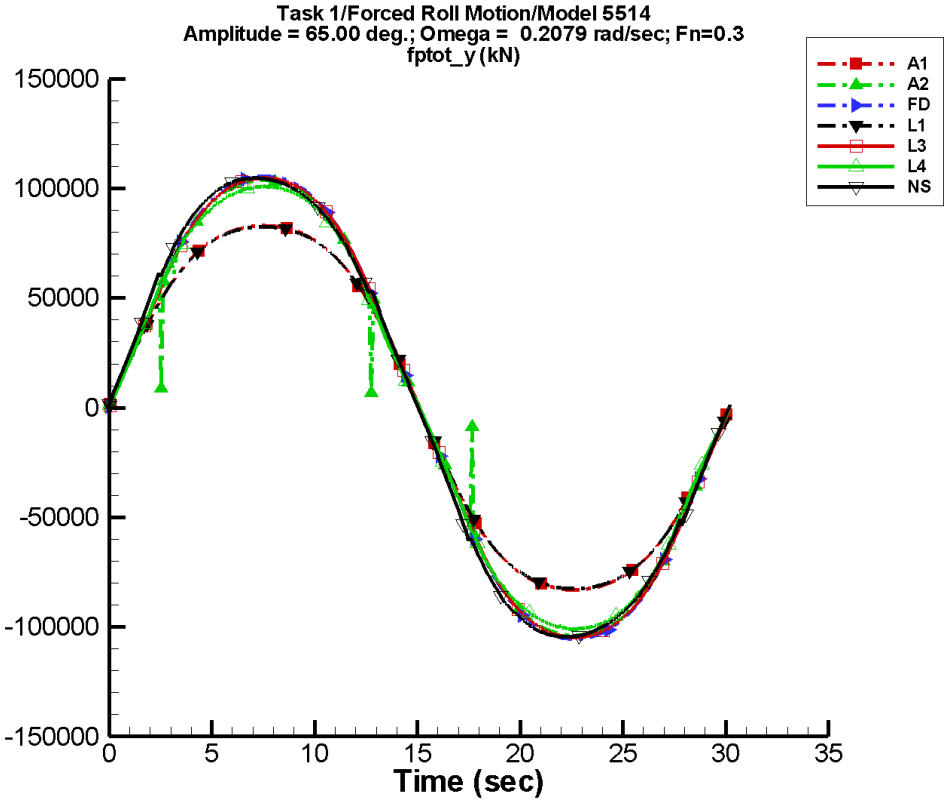
Figure D–79. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–157. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 44.7 | 6.63E+04 | 0 | 278. | 60 |
| A2 | -0.358 | 7.56E+04 | 0 | 560. | -72 |
| FD | -42.4 | 7.74E+04 | 0 | 204. | -112 |
| L1 | 108. | 6.62E+04 | 0 | 427. | 87 |
| L3 | -80.9 | 7.68E+04 | 0 | 309. | -94 |
| L4 | -109. | 7.36E+04 | 1 | 395. | -78 |
| NF | — | — | — | — | — |
| NS | 2.41 | 7.72E+04 | 1 | 1.98 | -134 |

Table D–158. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.47E+04 | 6.47E+04 | -6.46E+04 | 6.47E+04 |
| A2 | -7.70E+04 | 7.74E+04 | -7.76E+04 | 7.70E+04 |
| FD | -7.80E+04 | 7.80E+04 | -7.79E+04 | 7.79E+04 |
| L1 | -6.45E+04 | 6.45E+04 | -6.44E+04 | 6.44E+04 |
| L3 | -7.74E+04 | 7.74E+04 | -7.74E+04 | 7.74E+04 |
| L4 | -7.43E+04 | 7.43E+04 | -7.42E+04 | 7.42E+04 |
| NF | — | — | — | — |
| NS | -7.74E+04 | 7.74E+04 | -7.73E+04 | 7.73E+04 |




Data identically zero, insufficient, or not available from NFA.

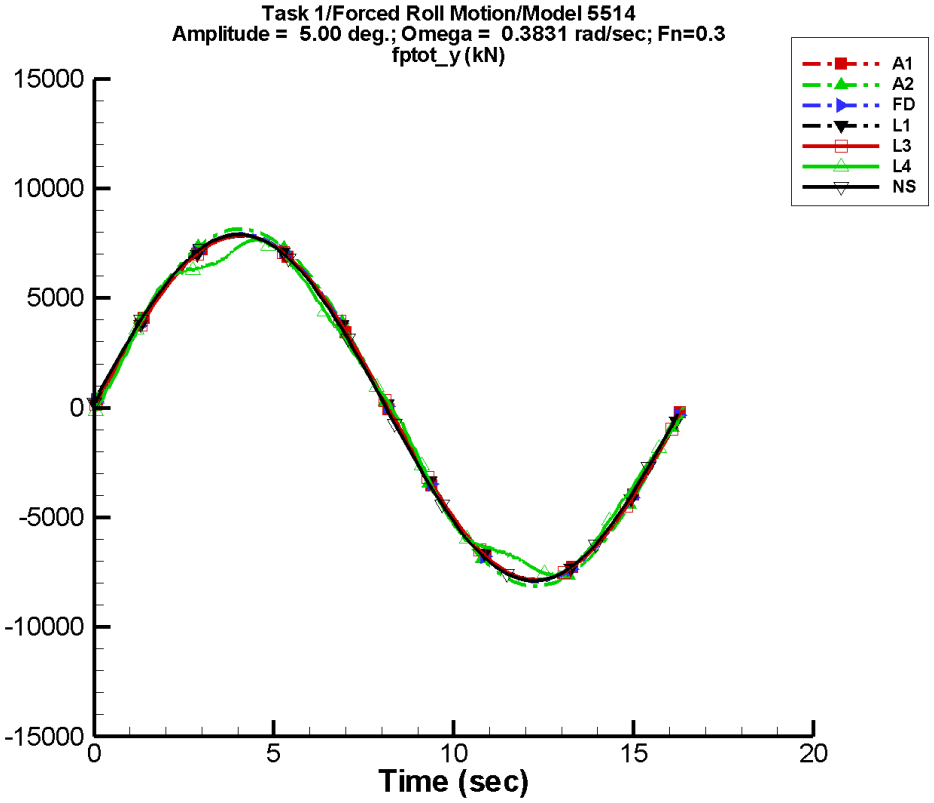
Figure D–80. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–159. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 129. | 8.79E+04 | 1 | 806. | 60 |
| A2 | -96.1 | 1.07E+05 | 0 | 479. | 4 |
| FD | 18.4 | 1.09E+05 | 0 | 221. | 25 |
| L1 | 314. | 8.76E+04 | 0 | 1.24E+03 | 87 |
| L3 | 81.7 | 1.08E+05 | 0 | 354. | 90 |
| L4 | 92.5 | 1.04E+05 | 1 | 352. | 95 |
| NF | — | — | — | — | — |
| NS | 78.7 | 1.09E+05 | 2 | 69.4 | -92 |

Table D–160. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.30E+04 | 8.30E+04 | -8.30E+04 | 8.32E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.05E+05 | 1.05E+05 |
| L1 | -8.25E+04 | 8.25E+04 | -8.25E+04 | 8.25E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.01E+05 | 1.01E+05 | -1.01E+05 | 1.01E+05 |
| NF | — | — | — | — |
| NS | -1.04E+05 | 1.05E+05 | -1.04E+05 | 1.05E+05 |




Data identically zero, insufficient, or not available from NFA.

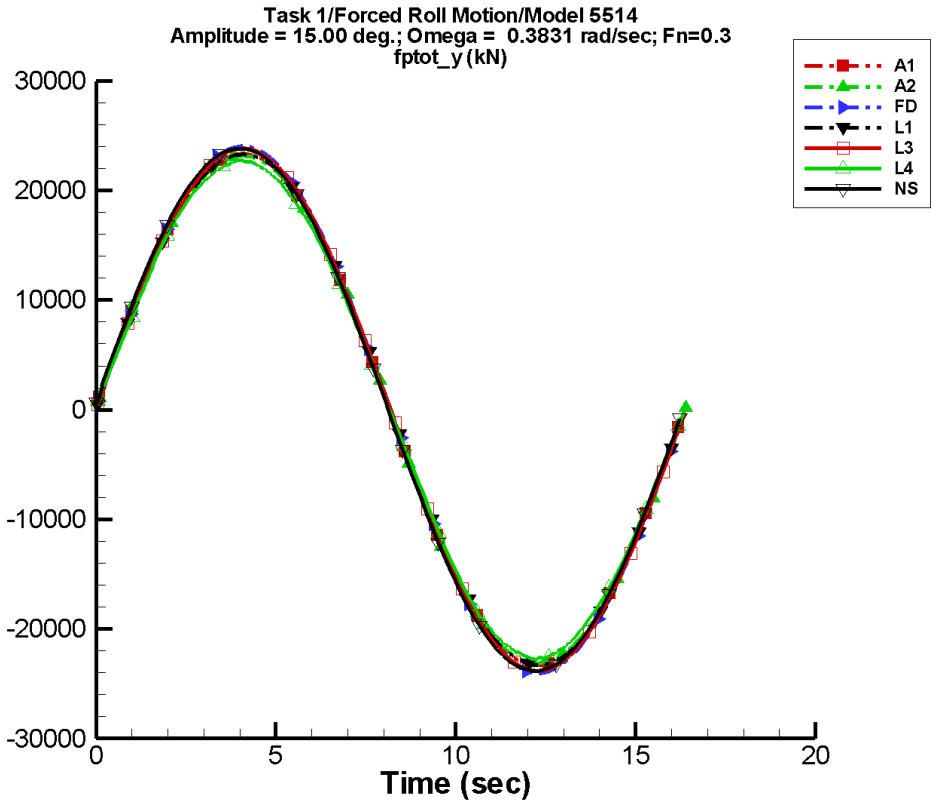
Figure D–81. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–161. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.310 | 7.86E+03 | 1 | 0.171 | 125 |
| A2 | 1.45 | 8.18E+03 | 1 | 6.61 | 61 |
| FD | -2.47E-02 | 7.92E+03 | 0 | 7.10E-02 | -65 |
| L1 | 0.169 | 7.85E+03 | 0 | 0.286 | 28 |
| L3 | -0.137 | 7.86E+03 | 0 | 0.250 | -147 |
| L4 | 0.537 | 7.49E+03 | 1 | 41.8 | -24 |
| NF | — | — | — | — | — |
| NS | -1.38E-02 | 7.89E+03 | 2 | 2.77E-02 | -53 |

Table D–162. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.85E+03 | 7.86E+03 | -7.82E+03 | 7.89E+03 |
| A2 | -8.14E+03 | 8.15E+03 | -8.11E+03 | 8.17E+03 |
| FD | -7.92E+03 | 7.92E+03 | -7.89E+03 | 7.89E+03 |
| L1 | -7.84E+03 | 7.84E+03 | -7.83E+03 | 7.83E+03 |
| L3 | -7.86E+03 | 7.86E+03 | -7.85E+03 | 7.85E+03 |
| L4 | -7.67E+03 | 7.65E+03 | -7.59E+03 | 7.62E+03 |
| NF | — | — | — | — |
| NS | -7.89E+03 | 7.89E+03 | -7.81E+03 | 7.81E+03 |




Data identically zero, insufficient, or not available from NFA.

Figure D–82. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–163. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.08 | 2.34E+04 | 1 | 10.2 | 65 |
| A2 | 10.4 | 2.33E+04 | 1 | 50.9 | 66 |
| FD | -2.23 | 2.40E+04 | 0 | 15.2 | -104 |
| L1 | 4.22 | 2.34E+04 | 0 | 7.67 | 28 |
| L3 | -4.00 | 2.38E+04 | 0 | 7.96 | -152 |
| L4 | -15.8 | 2.26E+04 | 1 | 13.4 | -103 |
| NF | — | — | — | — | — |
| NS | -0.199 | 2.38E+04 | 2 | 4.19E-02 | 59 |

Table D–164. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.33E+04 | 2.33E+04 | -2.32E+04 | 2.34E+04 |
| A2 | -2.31E+04 | 2.32E+04 | -2.30E+04 | 2.32E+04 |
| FD | -2.40E+04 | 2.40E+04 | -2.39E+04 | 2.39E+04 |
| L1 | -2.33E+04 | 2.33E+04 | -2.33E+04 | 2.33E+04 |
| L3 | -2.38E+04 | 2.38E+04 | -2.38E+04 | 2.38E+04 |
| L4 | -2.28E+04 | 2.27E+04 | -2.27E+04 | 2.27E+04 |
| NF | — | — | — | — |
| NS | -2.38E+04 | 2.38E+04 | -2.36E+04 | 2.36E+04 |

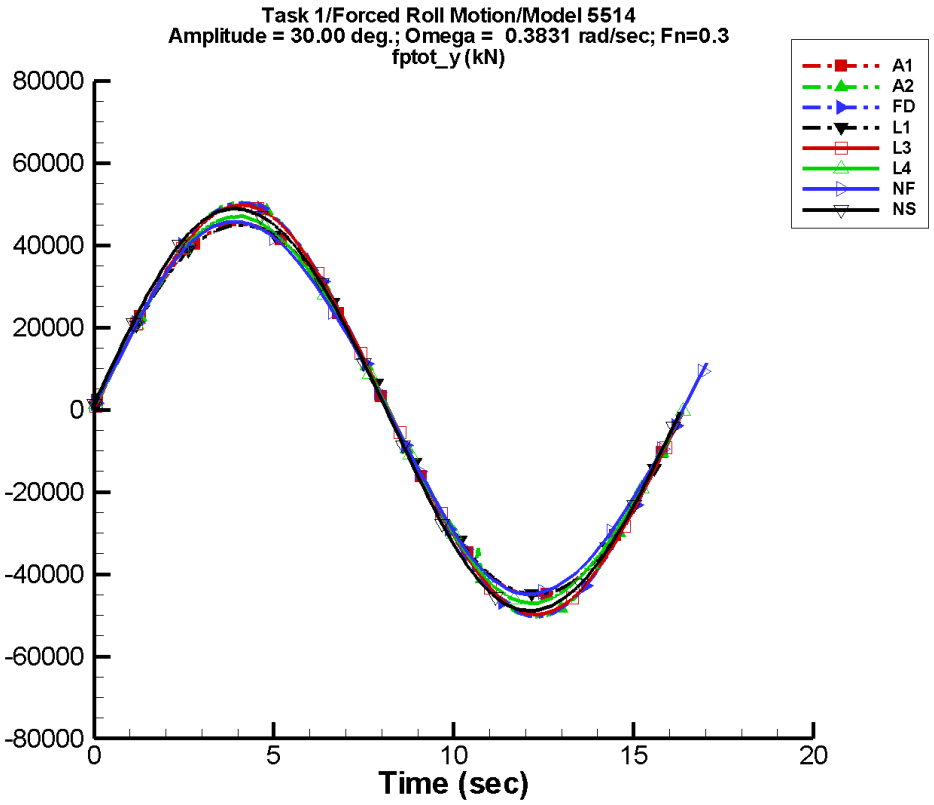



Figure D–83. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–165. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 11.8 | 4.56E+04 | 1 | 86.4 | 63 |
| A2 | 18.0 | 4.93E+04 | 0 | 165. | -108 |
| FD | -22.0 | 4.96E+04 | 0 | 150. | -104 |
| L1 | 32.2 | 4.55E+04 | 0 | 60.6 | 28 |
| L3 | -40.5 | 4.90E+04 | 0 | 78.0 | -153 |
| L4 | -37.3 | 4.65E+04 | 1 | 43.9 | -110 |
| NF | 745. | 4.43E+04 | 39 | 2.27E+03 | -120 |
| NS | -1.64 | 4.89E+04 | 2 | 0.984 | 110 |

Table D–166. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.51E+04 | 4.52E+04 | -4.50E+04 | 4.53E+04 |
| A2 | -5.03E+04 | 5.04E+04 | -5.01E+04 | 5.05E+04 |
| FD | -5.03E+04 | 5.03E+04 | -5.01E+04 | 5.01E+04 |
| L1 | -4.50E+04 | 4.50E+04 | -4.49E+04 | 4.49E+04 |
| L3 | -4.98E+04 | 4.98E+04 | -4.97E+04 | 4.97E+04 |
| L4 | -4.71E+04 | 4.71E+04 | -4.70E+04 | 4.69E+04 |
| NF | -4.49E+04 | 4.57E+04 | -4.46E+04 | 4.54E+04 |
| NS | -4.89E+04 | 4.89E+04 | -4.87E+04 | 4.87E+04 |

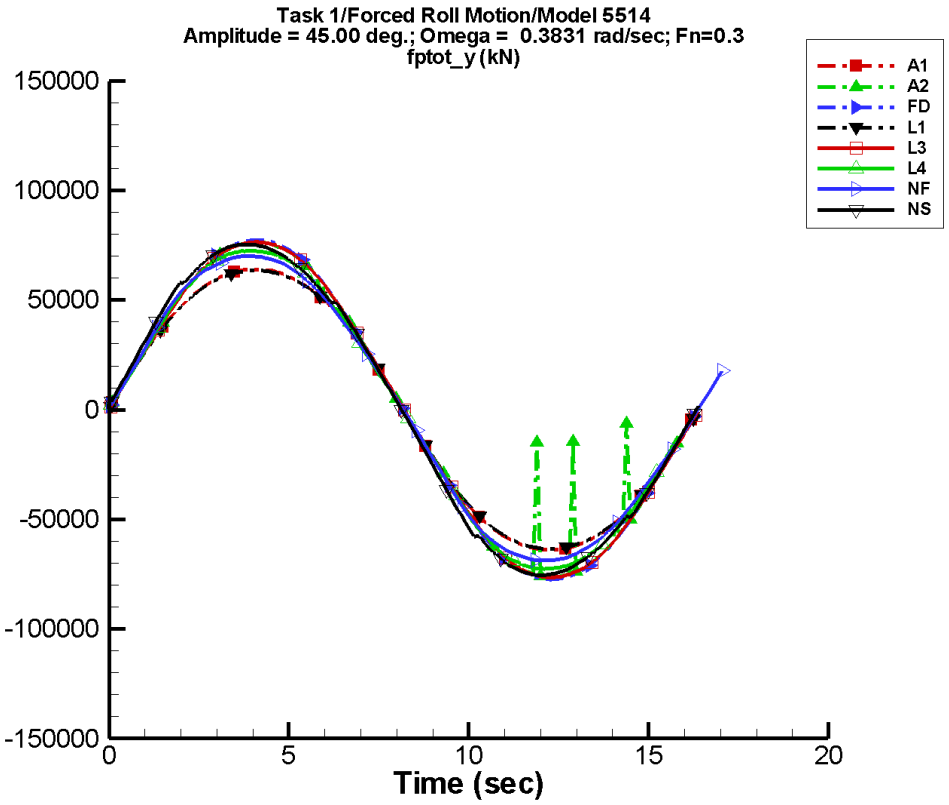



Figure D–84. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–167. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 36.1 | 6.56E+04 | 1 | 290. | 63 |
| A2 | 1.00E+03 | 7.39E+04 | 1 | 1.59E+03 | -114 |
| FD | -34.2 | 7.68E+04 | 0 | 267. | -108 |
| L1 | 106. | 6.54E+04 | 0 | 201. | 29 |
| L3 | -85.1 | 7.58E+04 | 0 | 164. | -145 |
| L4 | -52.3 | 7.28E+04 | 1 | 194. | -104 |
| NF | 1.18E+03 | 6.91E+04 | 39 | 3.40E+03 | -121 |
| NS | -5.85 | 7.58E+04 | 3 | 3.91 | 111 |

Table D–168. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.40E+04 | 6.40E+04 | -6.38E+04 | 6.42E+04 |
| A2 | -7.63E+04 | 7.64E+04 | -7.12E+04 | 7.66E+04 |
| FD | -7.74E+04 | 7.74E+04 | -7.71E+04 | 7.71E+04 |
| L1 | -6.35E+04 | 6.35E+04 | -6.34E+04 | 6.34E+04 |
| L3 | -7.65E+04 | 7.65E+04 | -7.64E+04 | 7.64E+04 |
| L4 | -7.26E+04 | 7.25E+04 | -7.25E+04 | 7.24E+04 |
| NF | -6.88E+04 | 7.01E+04 | -6.85E+04 | 6.97E+04 |
| NS | -7.55E+04 | 7.55E+04 | -7.54E+04 | 7.54E+04 |

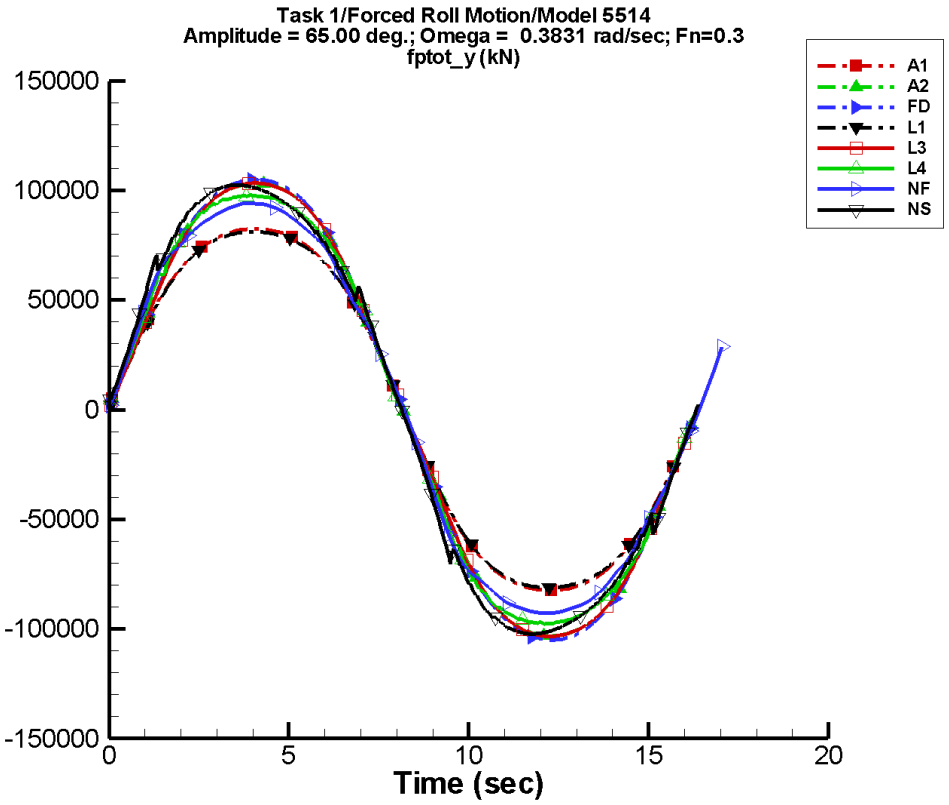


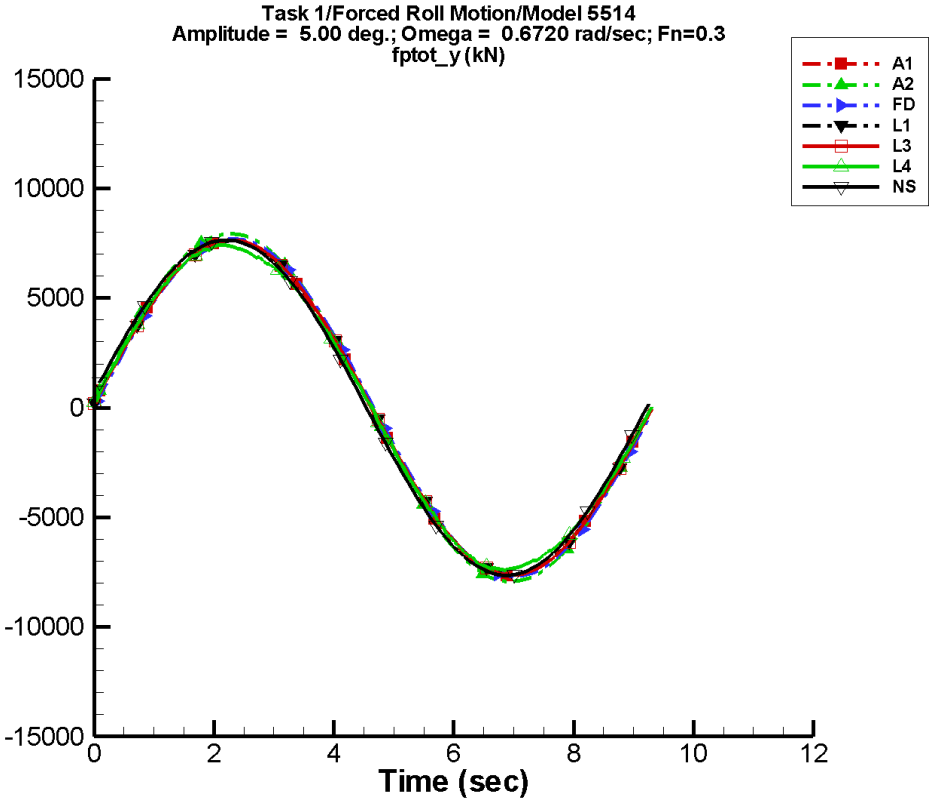

Figure D–85. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–169. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 102. | 8.71E+04 | 1 | 844. | 63 |
| A2 | -28.5 | 1.06E+05 | 0 | 291. | 53 |
| FD | 43.7 | 1.08E+05 | 0 | 280. | 84 |
| L1 | 306. | 8.65E+04 | 1 | 582. | 29 |
| L3 | 62.2 | 1.07E+05 | 0 | 169. | -14 |
| L4 | 295. | 1.03E+05 | 2 | 528. | 2 |
| NF | 1.59E+03 | 9.70E+04 | 40 | 4.39E+03 | -132 |
| NS | 58.1 | 1.07E+05 | 3 | 37.1 | -77 |

Table D–170. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.24E+04 | 8.25E+04 | -8.23E+04 | 8.28E+04 |
| A2 | -1.03E+05 | 1.03E+05 | -1.03E+05 | 1.04E+05 |
| FD | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L1 | -8.12E+04 | 8.12E+04 | -8.11E+04 | 8.11E+04 |
| L3 | -1.03E+05 | 1.03E+05 | -1.03E+05 | 1.03E+05 |
| L4 | -9.77E+04 | 9.78E+04 | -9.74E+04 | 9.76E+04 |
| NF | -9.28E+04 | 9.42E+04 | -9.23E+04 | 9.38E+04 |
| NS | -1.02E+05 | 1.03E+05 | -1.02E+05 | 1.02E+05 |




Data identically zero, insufficient, or not available from NFA.

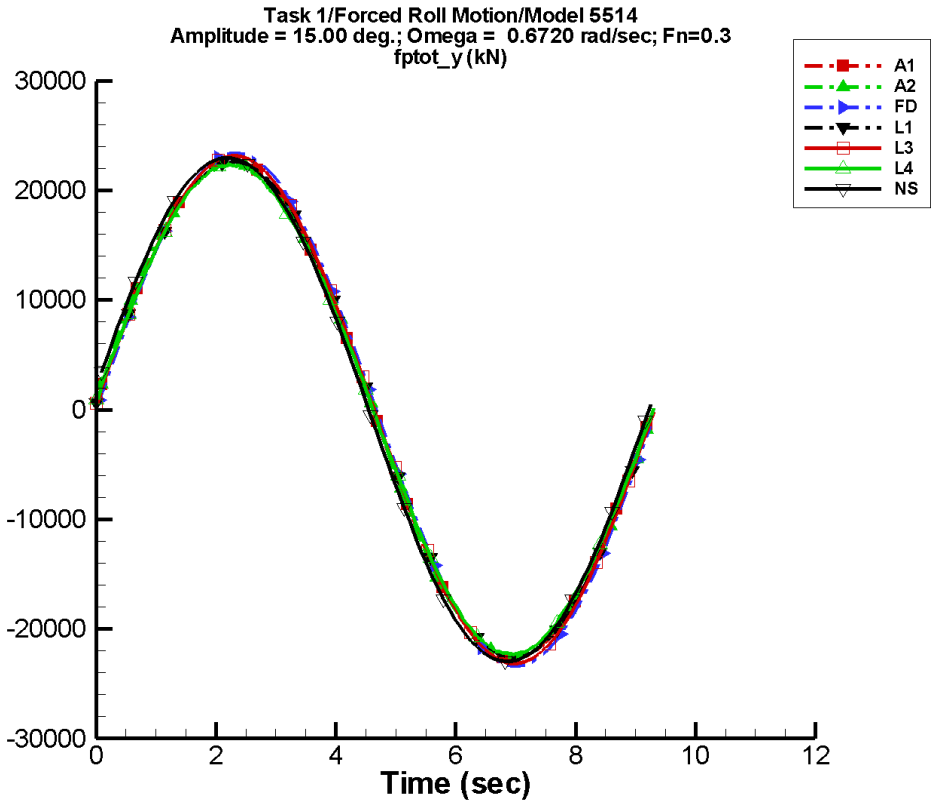
Figure D–86. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–171. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.844 | 7.66E+03 | 2 | 2.36 | 91 |
| A2 | 2.93 | 7.97E+03 | 2 | 6.61 | 57 |
| FD | -6.32E-02 | 7.70E+03 | 0 | 7.46E-02 | -6 |
| L1 | 0.275 | 7.62E+03 | 1 | 0.291 | 26 |
| L3 | -3.21E-02 | 7.63E+03 | 1 | 0.261 | -153 |
| L4 | 4.12 | 7.40E+03 | 3 | 19.5 | -10 |
| NF | — | — | — | — | — |
| NS | 0.294 | 7.65E+03 | 5 | 0.323 | -22 |

Table D–172. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.65E+03 | 7.65E+03 | -7.56E+03 | 7.56E+03 |
| A2 | -7.94E+03 | 7.93E+03 | -7.85E+03 | 7.84E+03 |
| FD | -7.70E+03 | 7.70E+03 | -7.66E+03 | 7.61E+03 |
| L1 | -7.62E+03 | 7.62E+03 | -7.58E+03 | 7.58E+03 |
| L3 | -7.63E+03 | 7.63E+03 | -7.60E+03 | 7.60E+03 |
| L4 | -7.40E+03 | 7.42E+03 | -7.35E+03 | 7.36E+03 |
| NF | — | — | — | — |
| NS | -7.64E+03 | 7.64E+03 | -7.57E+03 | 7.57E+03 |




Data identically zero, insufficient, or not available from NFA.

Figure D–87. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–173. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.08 | 2.28E+04 | 2 | 12.8 | 72 |
| A2 | 16.7 | 2.27E+04 | 2 | 46.0 | 61 |
| FD | -6.22 | 2.33E+04 | 0 | 11.5 | -34 |
| L1 | 4.58 | 2.27E+04 | 1 | 7.87 | 25 |
| L3 | -3.93 | 2.31E+04 | 1 | 8.25 | -157 |
| L4 | 10.3 | 2.22E+04 | 2 | 37.1 | -3 |
| NF | — | — | — | — | — |
| NS | 0.481 | 2.30E+04 | 5 | 0.845 | -5 |

Table D–174. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.27E+04 | 2.27E+04 | -2.25E+04 | 2.25E+04 |
| A2 | -2.25E+04 | 2.25E+04 | -2.23E+04 | 2.23E+04 |
| FD | -2.34E+04 | 2.34E+04 | -2.33E+04 | 2.31E+04 |
| L1 | -2.26E+04 | 2.26E+04 | -2.25E+04 | 2.25E+04 |
| L3 | -2.32E+04 | 2.32E+04 | -2.31E+04 | 2.31E+04 |
| L4 | -2.23E+04 | 2.23E+04 | -2.22E+04 | 2.22E+04 |
| NF | — | — | — | — |
| NS | -2.30E+04 | 2.30E+04 | -2.27E+04 | 2.27E+04 |

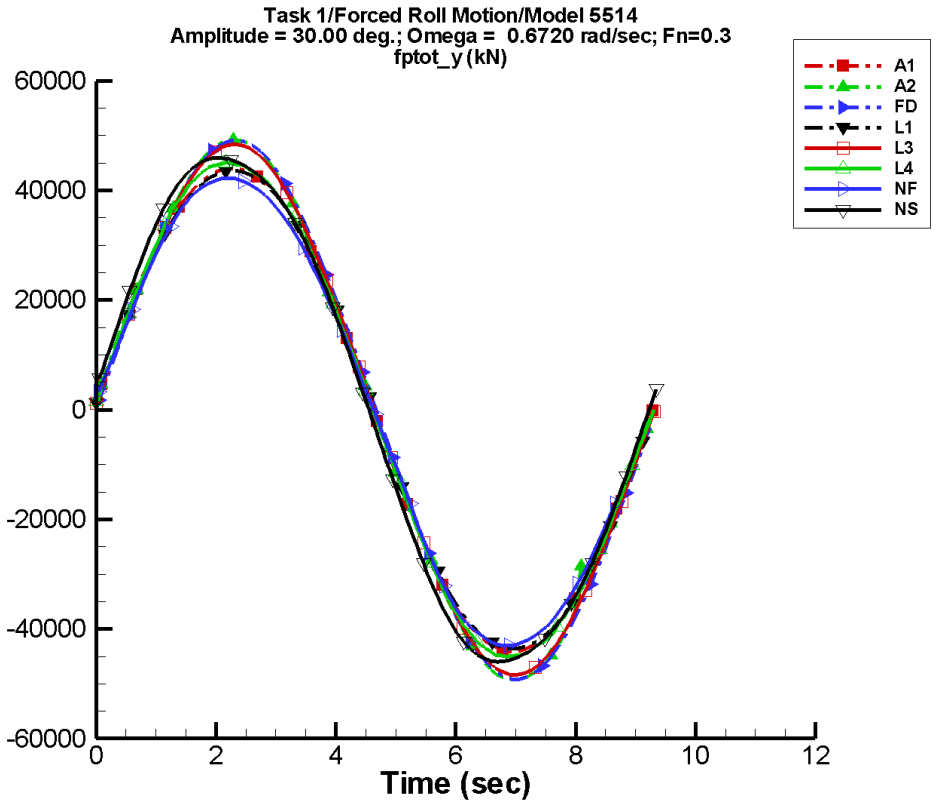



Figure D–88. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–175. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 27.0 | 4.46E+04 | 2 | 67.6 | 60 |
| A2 | 16.4 | 4.80E+04 | 2 | 266. | -168 |
| FD | -59.9 | 4.84E+04 | 0 | 112. | -34 |
| L1 | 33.6 | 4.42E+04 | 2 | 62.2 | 25 |
| L3 | -41.4 | 4.77E+04 | 1 | 80.5 | -157 |
| L4 | 3.33 | 4.54E+04 | 2 | 138. | -23 |
| NF | 1.19E+03 | 4.32E+04 | -47 | 1.54E+03 | 87 |
| NS | -2.39 | 4.68E+04 | 6 | 3.40 | 52 |

Table D–176. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.41E+04 | 4.40E+04 | -4.36E+04 | 4.36E+04 |
| A2 | -4.93E+04 | 4.92E+04 | -4.87E+04 | 4.86E+04 |
| FD | -4.92E+04 | 4.92E+04 | -4.88E+04 | 4.85E+04 |
| L1 | -4.36E+04 | 4.36E+04 | -4.34E+04 | 4.34E+04 |
| L3 | -4.84E+04 | 4.84E+04 | -4.82E+04 | 4.82E+04 |
| L4 | -4.50E+04 | 4.51E+04 | -4.49E+04 | 4.48E+04 |
| NF | -4.39E+04 | 4.36E+04 | -4.37E+04 | 4.33E+04 |
| NS | -4.60E+04 | 4.60E+04 | -4.58E+04 | 4.58E+04 |

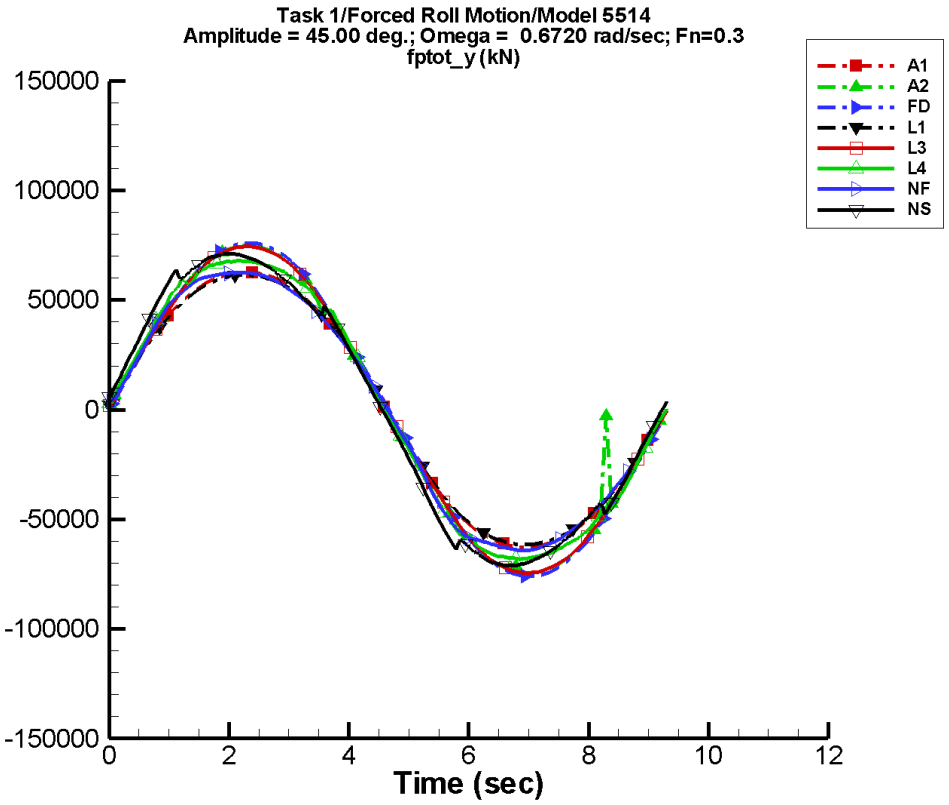



Figure D–89. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–177. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 81.5 | 6.43E+04 | 2 | 205. | 56 |
| A2 | 445. | 7.37E+04 | 2 | 1.02E+03 | -173 |
| FD | -104. | 7.53E+04 | 0 | 213. | -46 |
| L1 | 109. | 6.33E+04 | 2 | 206. | 25 |
| L3 | -72.4 | 7.38E+04 | 1 | 157. | -137 |
| L4 | 143. | 7.10E+04 | 3 | 403. | -14 |
| NF | 1.65E+03 | 6.65E+04 | -46 | 2.48E+03 | 89 |
| NS | -10.6 | 7.24E+04 | 6 | 9.09 | 49 |

Table D–178. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.27E+04 | 6.27E+04 | -6.21E+04 | 6.21E+04 |
| A2 | -7.50E+04 | 7.49E+04 | -7.38E+04 | 7.41E+04 |
| FD | -7.60E+04 | 7.60E+04 | -7.56E+04 | 7.51E+04 |
| L1 | -6.15E+04 | 6.15E+04 | -6.13E+04 | 6.13E+04 |
| L3 | -7.44E+04 | 7.44E+04 | -7.41E+04 | 7.41E+04 |
| L4 | -6.84E+04 | 6.81E+04 | -6.78E+04 | 6.77E+04 |
| NF | -6.47E+04 | 6.47E+04 | -6.45E+04 | 6.44E+04 |
| NS | -7.12E+04 | 7.12E+04 | -7.10E+04 | 7.10E+04 |

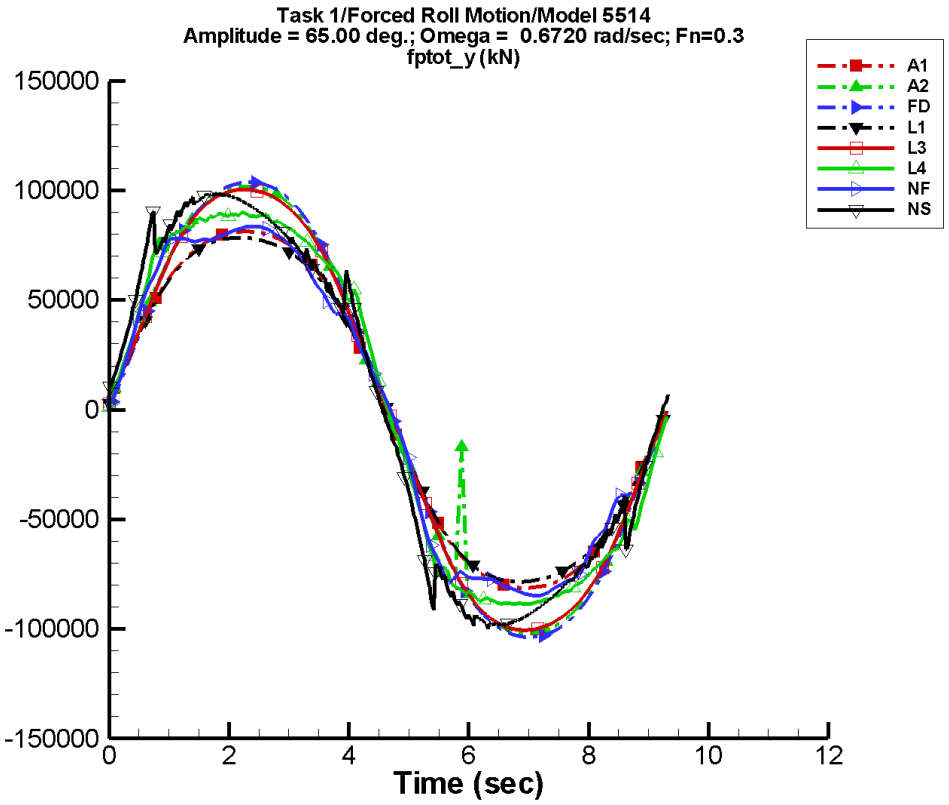


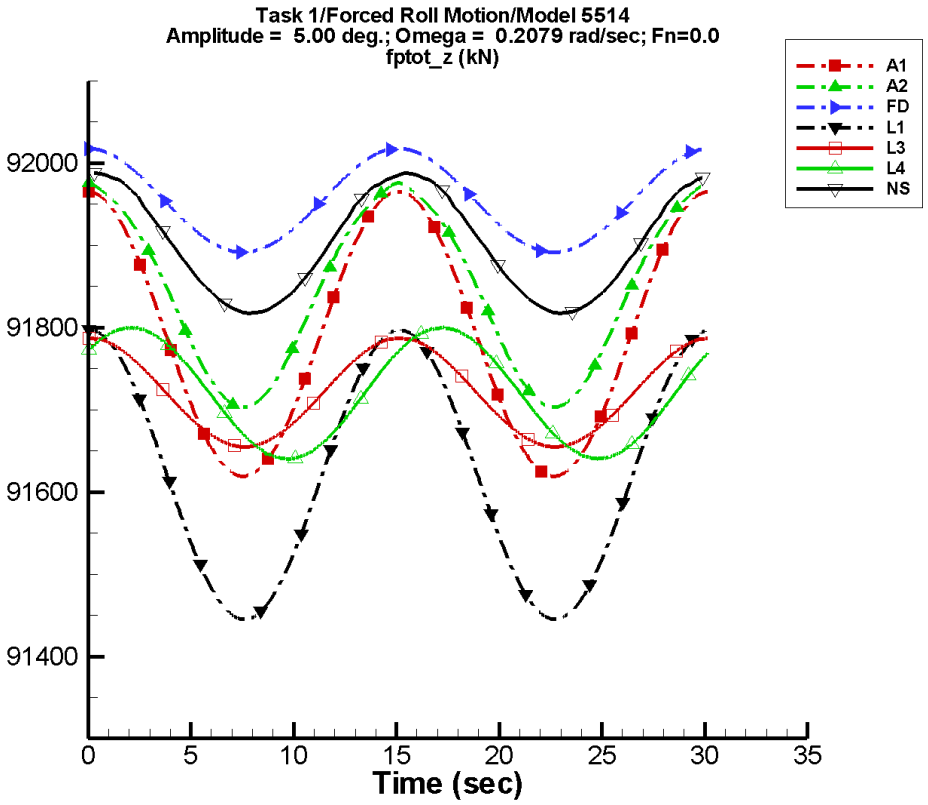

Figure D–90. Time history of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–179. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 227. | 8.59E+04 | 3 | 577. | 55 |
| A2 | 671. | 1.04E+05 | 1 | 1.36E+03 | 0 |
| FD | 80.6 | 1.06E+05 | 0 | 181. | -171 |
| L1 | 315. | 8.37E+04 | 2 | 595. | 26 |
| L3 | 97.6 | 1.04E+05 | 1 | 248. | -22 |
| L4 | 784. | 9.95E+04 | 3 | 1.47E+03 | 10 |
| NF | 2.25E+03 | 9.03E+04 | -44 | 3.15E+03 | 101 |
| NS | 19.1 | 1.03E+05 | 8 | 38.1 | -2 |

Table D–180. Minimum and maximum of of $F_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.13E+04 | 8.13E+04 | -8.08E+04 | 8.08E+04 |
| A2 | -1.02E+05 | 1.02E+05 | -1.02E+05 | 1.01E+05 |
| FD | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.03E+05 |
| L1 | -7.85E+04 | 7.85E+04 | -7.83E+04 | 7.83E+04 |
| L3 | -1.00E+05 | 1.00E+05 | -1.00E+05 | 1.00E+05 |
| L4 | -8.87E+04 | 9.02E+04 | -8.85E+04 | 8.91E+04 |
| NF | -8.48E+04 | 8.55E+04 | -8.41E+04 | 8.51E+04 |
| NS | -1.00E+05 | 9.87E+04 | -9.81E+04 | 9.83E+04 |




Data identically zero, insufficient, or not available from NFA.

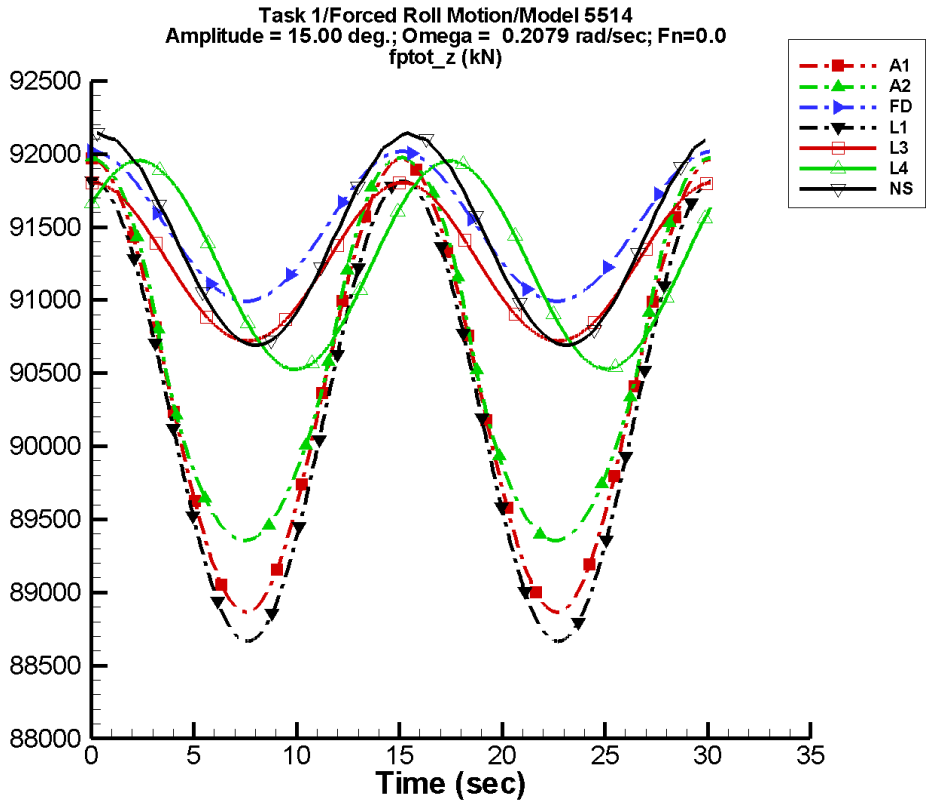
Figure D–91. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–181. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 2.53E-02 | 96 | 173. | 90 |
| A2 | 9.18E+04 | 5.28E-02 | 41 | 133. | 90 |
| FD | 9.20E+04 | 2.65E-02 | -107 | 63.0 | 90 |
| L1 | 9.16E+04 | 5.94E-02 | -15 | 176. | 89 |
| L3 | 9.17E+04 | 3.01E-02 | 105 | 65.9 | 89 |
| L4 | 9.17E+04 | 6.67E-02 | -156 | 79.5 | 39 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 6.09E-02 | -9 | 85.5 | 81 |

Table D–182. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.16E+04 | 9.18E+04 | 9.16E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

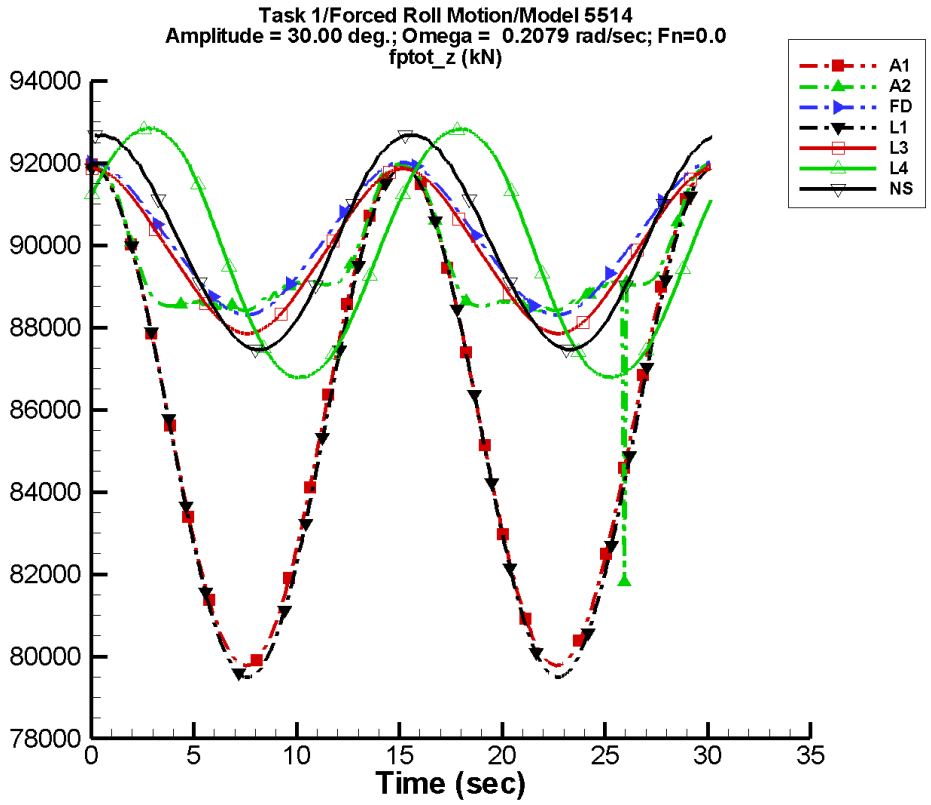
Figure D–92. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–183. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 6.95E-02 | -165 | 1.55E+03 | 90 |
| A2 | 9.06E+04 | 1.69 | -159 | 1.36E+03 | 91 |
| FD | 9.15E+04 | 0.299 | -172 | 511. | 90 |
| L1 | 9.02E+04 | 0.135 | 111 | 1.57E+03 | 89 |
| L3 | 9.13E+04 | 0.851 | 120 | 539. | 89 |
| L4 | 9.12E+04 | 0.767 | -163 | 712. | 34 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 0.623 | -13 | 723. | 80 |

Table D–184. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.89E+04 | 9.20E+04 | 8.89E+04 | 9.20E+04 |
| A2 | 8.94E+04 | 9.20E+04 | 8.94E+04 | 9.20E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.05E+04 | 9.20E+04 | 9.05E+04 | 9.20E+04 |
| NF | — | — | — | — |
| NS | 9.07E+04 | 9.21E+04 | 9.07E+04 | 9.21E+04 |




Data identically zero, insufficient, or not available from NFA.

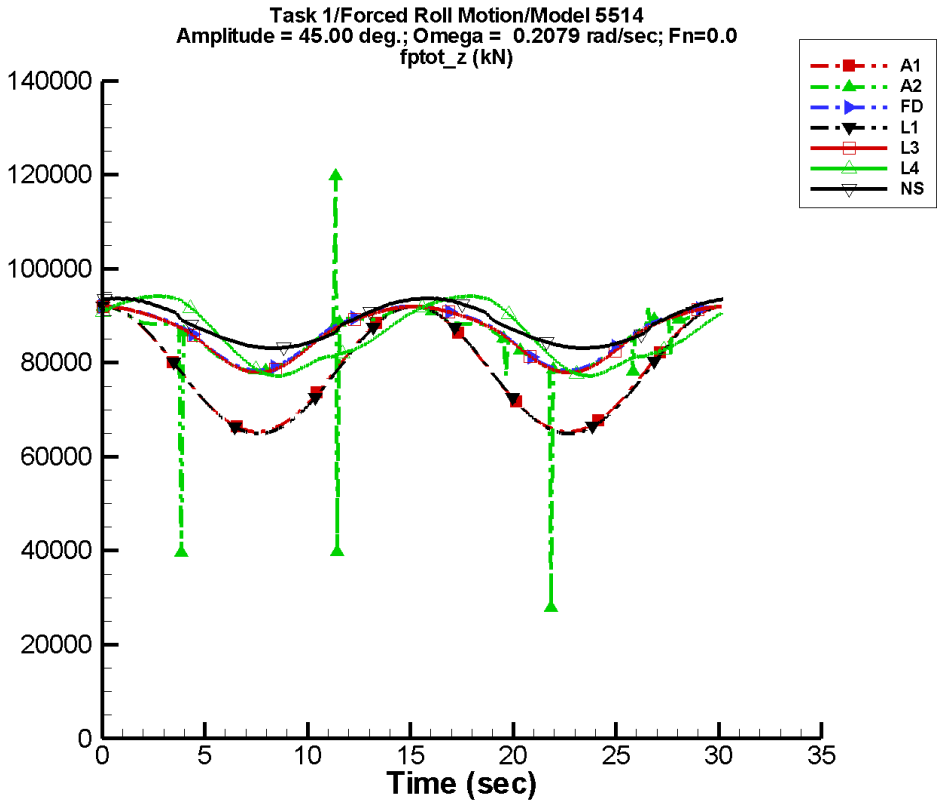
Figure D–93. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–185. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 0.573 | -166 | 6.10E+03 | 90 |
| A2 | 8.95E+04 | 33.7 | -50 | 1.45E+03 | 99 |
| FD | 9.01E+04 | 0.321 | 93 | 1.81E+03 | 90 |
| L1 | 8.56E+04 | 2.58 | 119 | 6.19E+03 | 89 |
| L3 | 8.98E+04 | 2.38 | 113 | 1.96E+03 | 89 |
| L4 | 8.98E+04 | 6.97 | -79 | 3.07E+03 | 26 |
| NF | — | — | — | — | — |
| NS | 9.01E+04 | 2.94 | -14 | 2.61E+03 | 77 |

Table D–186. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.98E+04 | 9.20E+04 | 7.98E+04 | 9.20E+04 |
| A2 | 8.18E+04 | 9.20E+04 | 8.81E+04 | 9.20E+04 |
| FD | 8.83E+04 | 9.20E+04 | 8.83E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.19E+04 | 7.95E+04 | 9.19E+04 |
| L3 | 8.79E+04 | 9.19E+04 | 8.79E+04 | 9.19E+04 |
| L4 | 8.68E+04 | 9.29E+04 | 8.68E+04 | 9.28E+04 |
| NF | — | — | — | — |
| NS | 8.74E+04 | 9.27E+04 | 8.75E+04 | 9.27E+04 |




Data identically zero, insufficient, or not available from NFA.

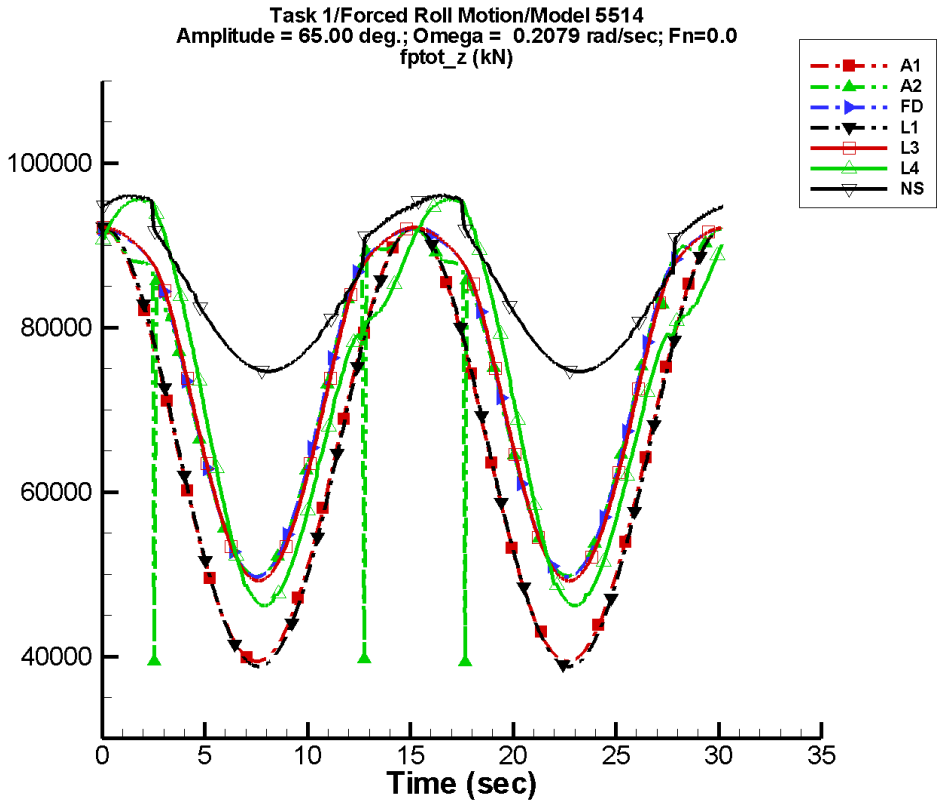
Figure D–94. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–187. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.85E+04 | 2.54 | -164 | 1.33E+04 | 90 |
| A2 | 8.54E+04 | 269. | 0 | 6.54E+03 | 94 |
| FD | 8.63E+04 | 29.9 | 11 | 6.55E+03 | 89 |
| L1 | 7.83E+04 | 12.9 | 120 | 1.35E+04 | 89 |
| L3 | 8.61E+04 | 77.7 | -59 | 6.86E+03 | 89 |
| L4 | 8.59E+04 | 66.4 | -47 | 8.11E+03 | 45 |
| NF | — | — | — | — | — |
| NS | 8.84E+04 | 7.20 | -13 | 5.42E+03 | 75 |

Table D–188. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.53E+04 | 9.20E+04 | 6.54E+04 | 9.20E+04 |
| A2 | 2.78E+04 | 1.20E+05 | 7.20E+04 | 9.20E+04 |
| FD | 7.84E+04 | 9.20E+04 | 7.84E+04 | 9.20E+04 |
| L1 | 6.49E+04 | 9.20E+04 | 6.49E+04 | 9.20E+04 |
| L3 | 7.79E+04 | 9.20E+04 | 7.79E+04 | 9.20E+04 |
| L4 | 7.72E+04 | 9.42E+04 | 7.72E+04 | 9.42E+04 |
| NF | — | — | — | — |
| NS | 8.31E+04 | 9.38E+04 | 8.31E+04 | 9.37E+04 |




Data identically zero, insufficient, or not available from NFA.

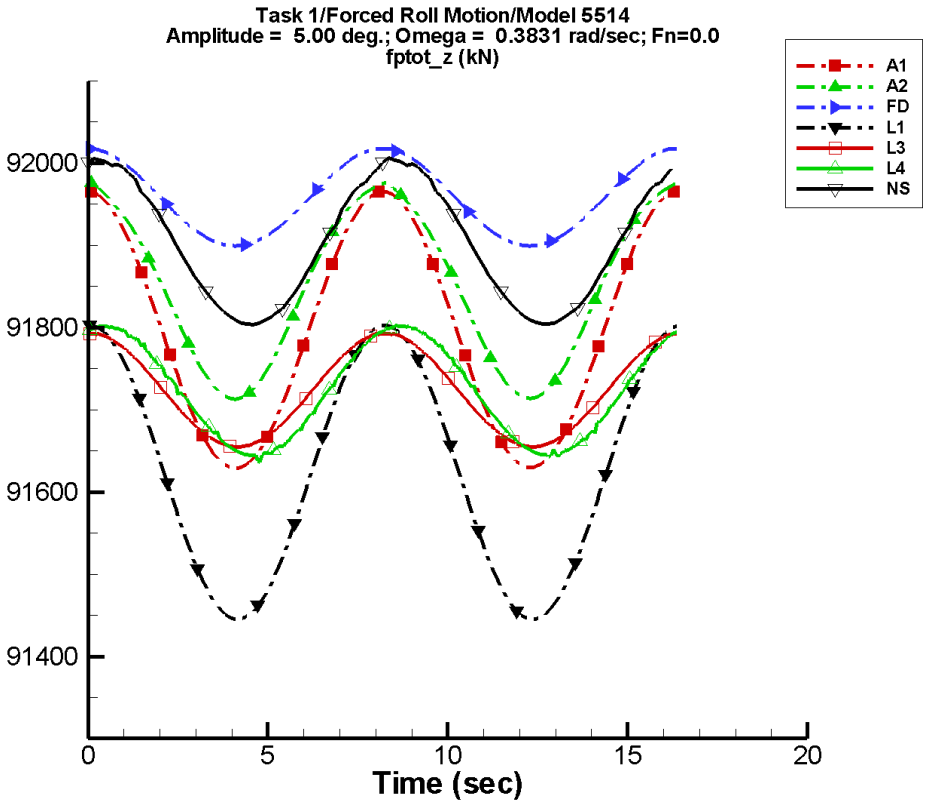
Figure D–95. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–189. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.49E+04 | 10.1 | -163 | 2.63E+04 | 90 |
| A2 | 7.32E+04 | 391. | 95 | 2.08E+04 | 91 |
| FD | 7.39E+04 | 68.5 | 3 | 2.17E+04 | 89 |
| L1 | 6.47E+04 | 54.2 | 119 | 2.66E+04 | 89 |
| L3 | 7.38E+04 | 271. | -61 | 2.23E+04 | 89 |
| L4 | 7.32E+04 | 259. | -46 | 2.37E+04 | 72 |
| NF | — | — | — | — | — |
| NS | 8.50E+04 | 45.7 | 4 | 1.08E+04 | 76 |

Table D–190. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.94E+04 | 9.20E+04 | 3.95E+04 | 9.20E+04 |
| A2 | 3.93E+04 | 9.20E+04 | 4.99E+04 | 9.19E+04 |
| FD | 4.97E+04 | 9.20E+04 | 4.98E+04 | 9.21E+04 |
| L1 | 3.88E+04 | 9.22E+04 | 3.88E+04 | 9.21E+04 |
| L3 | 4.92E+04 | 9.22E+04 | 4.92E+04 | 9.21E+04 |
| L4 | 4.61E+04 | 9.57E+04 | 4.62E+04 | 9.55E+04 |
| NF | — | — | — | — |
| NS | 7.45E+04 | 9.62E+04 | 7.46E+04 | 9.60E+04 |




Data identically zero, insufficient, or not available from NFA.

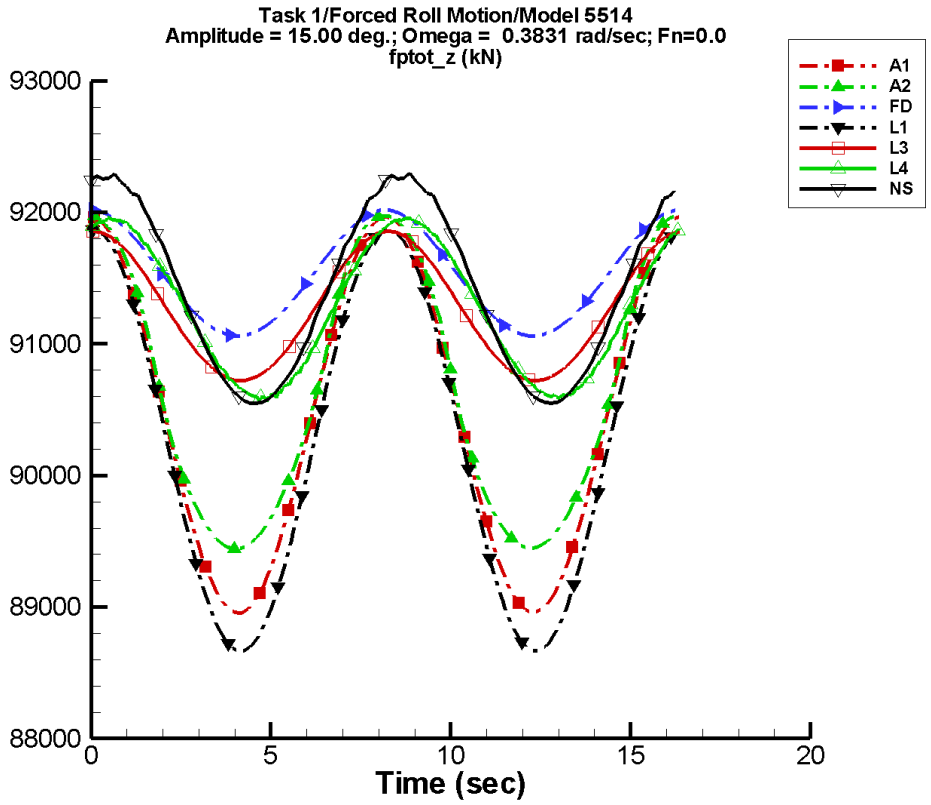
Figure D–96. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–191. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 2.69E-02 | 133 | 168. | 90 |
| A2 | 9.18E+04 | 5.68E-02 | 48 | 128. | 91 |
| FD | 9.20E+04 | 2.82E-02 | 155 | 59.1 | 91 |
| L1 | 9.16E+04 | 2.01E-02 | -177 | 179. | 87 |
| L3 | 9.17E+04 | 8.97E-03 | 125 | 68.8 | 87 |
| L4 | 9.17E+04 | 0.647 | -156 | 78.6 | 67 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 7.32E-02 | -137 | 99.9 | 73 |

Table D–192. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.16E+04 | 9.18E+04 | 9.16E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

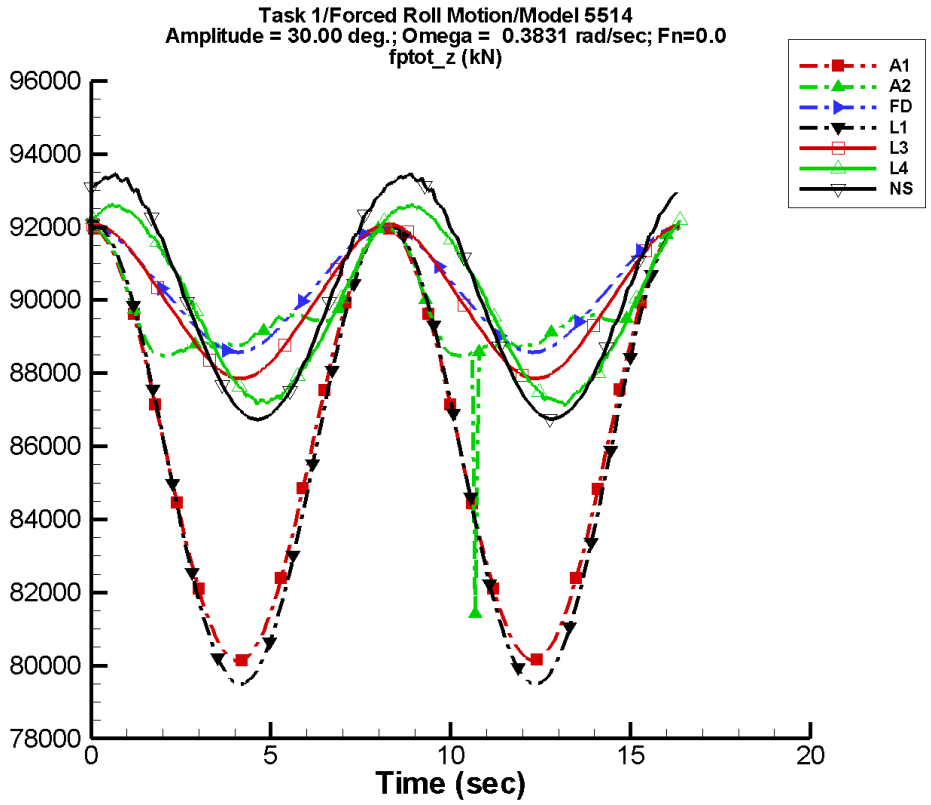
Figure D–97. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–193. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.05E+04 | 0.198 | 154 | 1.50E+03 | 90 |
| A2 | 9.06E+04 | 0.999 | -141 | 1.31E+03 | 91 |
| FD | 9.15E+04 | 0.591 | 118 | 476. | 91 |
| L1 | 9.03E+04 | 0.135 | 166 | 1.60E+03 | 87 |
| L3 | 9.13E+04 | 0.545 | 166 | 567. | 87 |
| L4 | 9.13E+04 | 4.93 | -144 | 677. | 64 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 0.829 | -144 | 867. | 70 |

Table D–194. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.90E+04 | 9.20E+04 | 8.90E+04 | 9.20E+04 |
| A2 | 8.94E+04 | 9.20E+04 | 8.94E+04 | 9.20E+04 |
| FD | 9.11E+04 | 9.20E+04 | 9.11E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.19E+04 | 8.87E+04 | 9.19E+04 |
| L3 | 9.07E+04 | 9.19E+04 | 9.07E+04 | 9.19E+04 |
| L4 | 9.06E+04 | 9.20E+04 | 9.06E+04 | 9.19E+04 |
| NF | — | — | — | — |
| NS | 9.05E+04 | 9.23E+04 | 9.06E+04 | 9.23E+04 |




Data identically zero, insufficient, or not available from NFA.

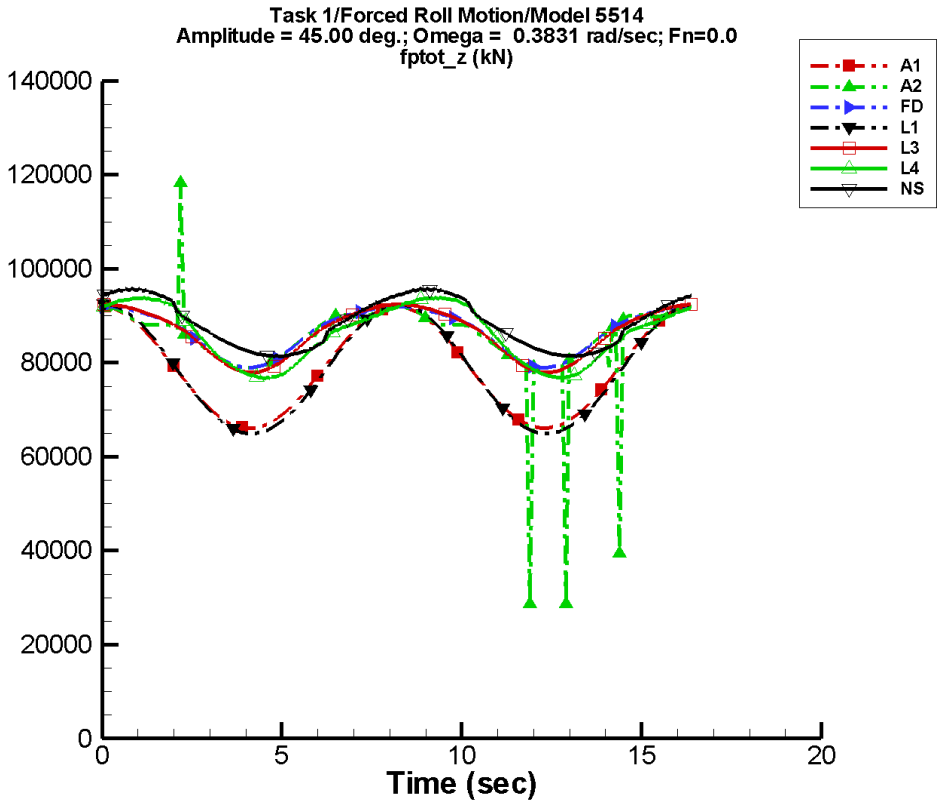
Figure D–98. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–195. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.60E+04 | 0.709 | 171 | 5.92E+03 | 90 |
| A2 | 8.97E+04 | 88.7 | 42 | 1.38E+03 | 112 |
| FD | 9.03E+04 | 0.426 | -44 | 1.68E+03 | 91 |
| L1 | 8.58E+04 | 1.71 | 164 | 6.29E+03 | 87 |
| L3 | 8.99E+04 | 2.46 | -163 | 2.07E+03 | 87 |
| L4 | 8.99E+04 | 19.1 | -101 | 2.65E+03 | 58 |
| NF | — | — | — | — | — |
| NS | 9.01E+04 | 3.73 | -142 | 3.33E+03 | 66 |

Table D–196. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.01E+04 | 9.20E+04 | 8.01E+04 | 9.19E+04 |
| A2 | 8.14E+04 | 9.20E+04 | 8.76E+04 | 9.19E+04 |
| FD | 8.86E+04 | 9.20E+04 | 8.86E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.21E+04 | 7.95E+04 | 9.21E+04 |
| L3 | 8.79E+04 | 9.21E+04 | 8.79E+04 | 9.21E+04 |
| L4 | 8.71E+04 | 9.26E+04 | 8.72E+04 | 9.26E+04 |
| NF | — | — | — | — |
| NS | 8.67E+04 | 9.35E+04 | 8.68E+04 | 9.34E+04 |




Data identically zero, insufficient, or not available from NFA.

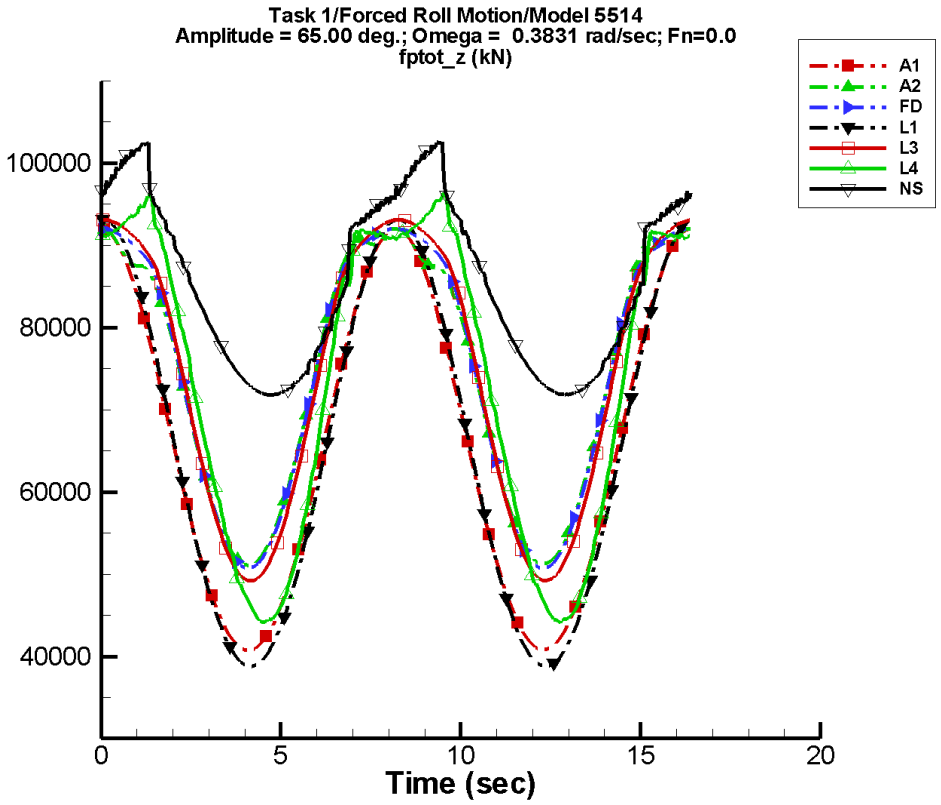
Figure D–99. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–197. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.89E+04 | 1.60 | -158 | 1.30E+04 | 90 |
| A2 | 8.53E+04 | 1.87E+03 | -14 | 6.98E+03 | 87 |
| FD | 8.67E+04 | 70.5 | -59 | 6.36E+03 | 90 |
| L1 | 7.85E+04 | 7.85 | 163 | 1.38E+04 | 87 |
| L3 | 8.63E+04 | 45.1 | -27 | 6.95E+03 | 87 |
| L4 | 8.61E+04 | 71.3 | -13 | 8.11E+03 | 65 |
| NF | — | — | — | — | — |
| NS | 8.85E+04 | 8.91 | -137 | 7.19E+03 | 63 |

Table D–198. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.60E+04 | 9.20E+04 | 6.60E+04 | 9.19E+04 |
| A2 | 2.86E+04 | 1.18E+05 | 7.32E+04 | 9.19E+04 |
| FD | 7.89E+04 | 9.20E+04 | 7.91E+04 | 9.20E+04 |
| L1 | 6.49E+04 | 9.24E+04 | 6.50E+04 | 9.25E+04 |
| L3 | 7.79E+04 | 9.24E+04 | 7.80E+04 | 9.24E+04 |
| L4 | 7.66E+04 | 9.39E+04 | 7.68E+04 | 9.37E+04 |
| NF | — | — | — | — |
| NS | 8.14E+04 | 9.59E+04 | 8.14E+04 | 9.57E+04 |




Data identically zero, insufficient, or not available from NFA.

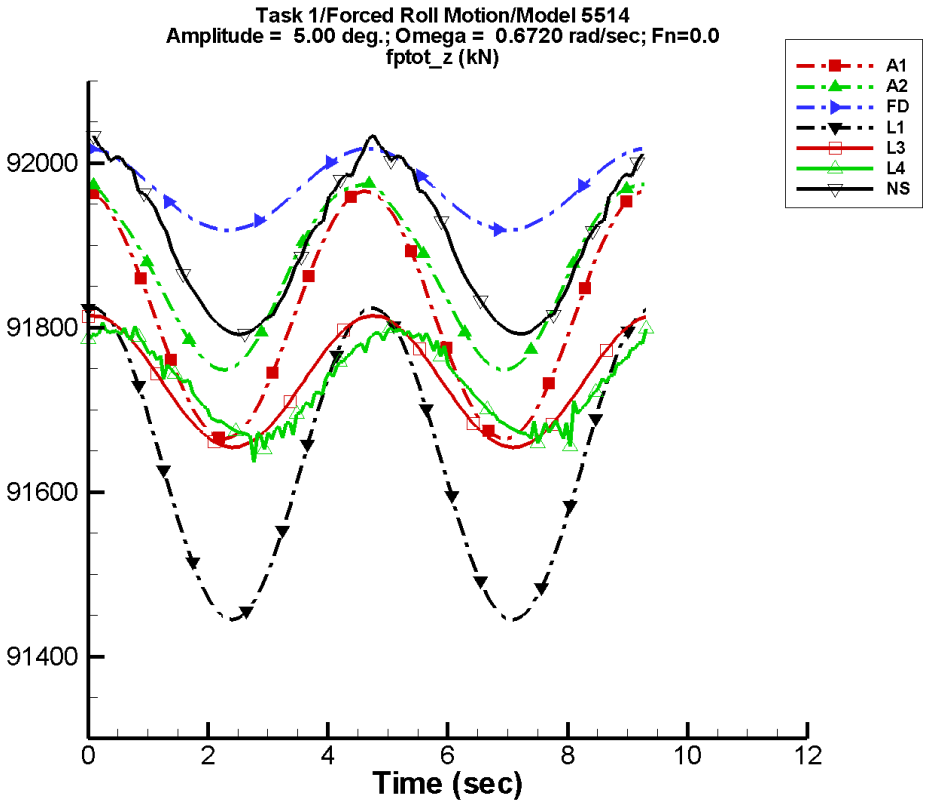
Figure D–100. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–199. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.57E+04 | 5.09 | -121 | 2.56E+04 | 90 |
| A2 | 7.43E+04 | 18.9 | -4 | 2.06E+04 | 91 |
| FD | 7.45E+04 | 140. | -61 | 2.14E+04 | 90 |
| L1 | 6.52E+04 | 32.9 | 162 | 2.72E+04 | 87 |
| L3 | 7.42E+04 | 171. | -9 | 2.23E+04 | 87 |
| L4 | 7.32E+04 | 400. | -75 | 2.51E+04 | 73 |
| NF | — | — | — | — | — |
| NS | 8.53E+04 | 9.74 | 45 | 1.43E+04 | 65 |

Table D–200. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 4.07E+04 | 9.20E+04 | 4.07E+04 | 9.18E+04 |
| A2 | 5.11E+04 | 9.20E+04 | 5.11E+04 | 9.17E+04 |
| FD | 5.07E+04 | 9.20E+04 | 5.11E+04 | 9.19E+04 |
| L1 | 3.88E+04 | 9.31E+04 | 3.89E+04 | 9.32E+04 |
| L3 | 4.92E+04 | 9.31E+04 | 4.93E+04 | 9.32E+04 |
| L4 | 4.41E+04 | 9.64E+04 | 4.44E+04 | 9.52E+04 |
| NF | — | — | — | — |
| NS | 7.18E+04 | 1.03E+05 | 7.18E+04 | 1.02E+05 |




Data identically zero, insufficient, or not available from NFA.

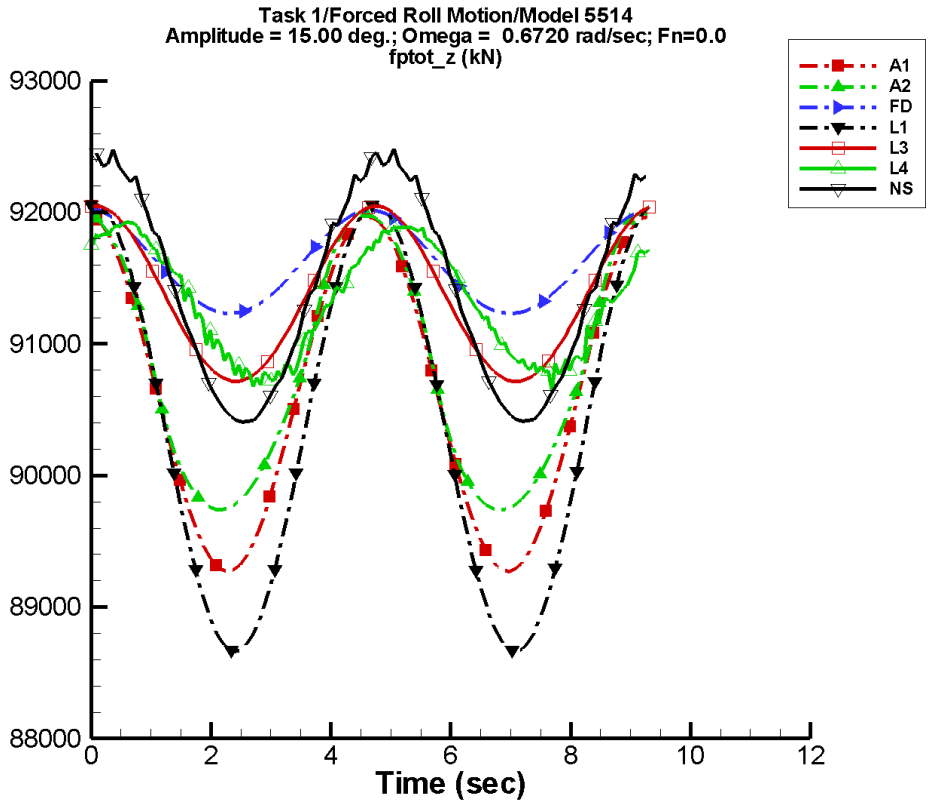
Figure D–101. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–201. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 7.99E-02 | 7 | 151. | 94 |
| A2 | 9.19E+04 | 0.568 | 1 | 112. | 99 |
| FD | 9.20E+04 | 7.43E-02 | 155 | 49.6 | 91 |
| L1 | 9.16E+04 | 1.34E-02 | 47 | 190. | 85 |
| L3 | 9.17E+04 | 3.76E-02 | 175 | 79.9 | 84 |
| L4 | 9.17E+04 | 2.58 | 169 | 65.2 | 57 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 0.330 | -166 | 114. | 76 |

Table D–202. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.16E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

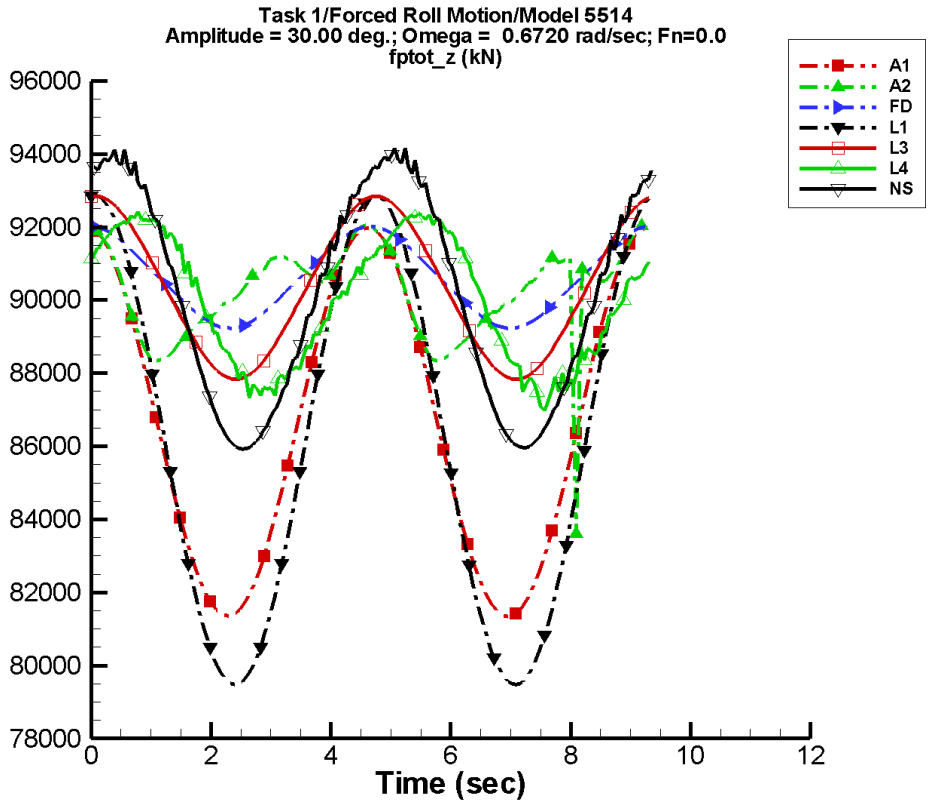
Figure D–102. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–203. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.06E+04 | 0.503 | -8 | 1.35E+03 | 94 |
| A2 | 9.08E+04 | 7.29 | -176 | 1.17E+03 | 97 |
| FD | 9.16E+04 | 0.851 | 151 | 391. | 91 |
| L1 | 9.04E+04 | 0.259 | -180 | 1.70E+03 | 85 |
| L3 | 9.14E+04 | 0.809 | 180 | 666. | 84 |
| L4 | 9.13E+04 | 18.8 | 168 | 570. | 50 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 3.17 | -168 | 1.01E+03 | 73 |

Table D–204. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.93E+04 | 9.20E+04 | 8.93E+04 | 9.19E+04 |
| A2 | 8.97E+04 | 9.20E+04 | 8.98E+04 | 9.19E+04 |
| FD | 9.12E+04 | 9.20E+04 | 9.12E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.21E+04 | 8.87E+04 | 9.21E+04 |
| L3 | 9.07E+04 | 9.20E+04 | 9.07E+04 | 9.20E+04 |
| L4 | 9.06E+04 | 9.19E+04 | 9.07E+04 | 9.19E+04 |
| NF | — | — | — | — |
| NS | 9.04E+04 | 9.25E+04 | 9.04E+04 | 9.24E+04 |




Data identically zero, insufficient, or not available from NFA.

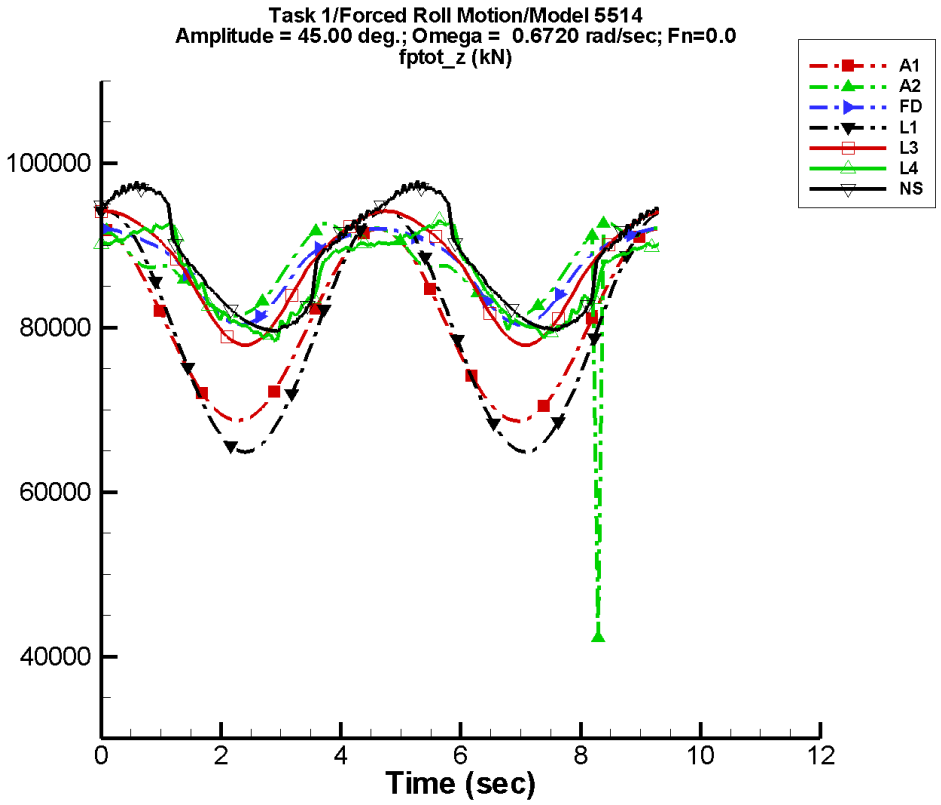
Figure D–103. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–205. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.66E+04 | 1.04 | -43 | 5.32E+03 | 94 |
| A2 | 9.02E+04 | 122. | -51 | 1.24E+03 | 143 |
| FD | 9.06E+04 | 0.728 | -24 | 1.35E+03 | 92 |
| L1 | 8.61E+04 | 2.90 | 180 | 6.69E+03 | 85 |
| L3 | 9.03E+04 | 0.835 | 177 | 2.46E+03 | 84 |
| L4 | 9.00E+04 | 68.4 | -52 | 2.36E+03 | 37 |
| NF | — | — | — | — | — |
| NS | 9.01E+04 | 15.1 | -170 | 3.97E+03 | 69 |

Table D–206. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.13E+04 | 9.20E+04 | 8.16E+04 | 9.17E+04 |
| A2 | 8.36E+04 | 9.20E+04 | 8.86E+04 | 9.18E+04 |
| FD | 8.92E+04 | 9.20E+04 | 8.93E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.29E+04 | 7.96E+04 | 9.28E+04 |
| L3 | 8.78E+04 | 9.28E+04 | 8.79E+04 | 9.28E+04 |
| L4 | 8.70E+04 | 9.24E+04 | 8.74E+04 | 9.23E+04 |
| NF | — | — | — | — |
| NS | 8.59E+04 | 9.42E+04 | 8.60E+04 | 9.39E+04 |




Data identically zero, insufficient, or not available from NFA.

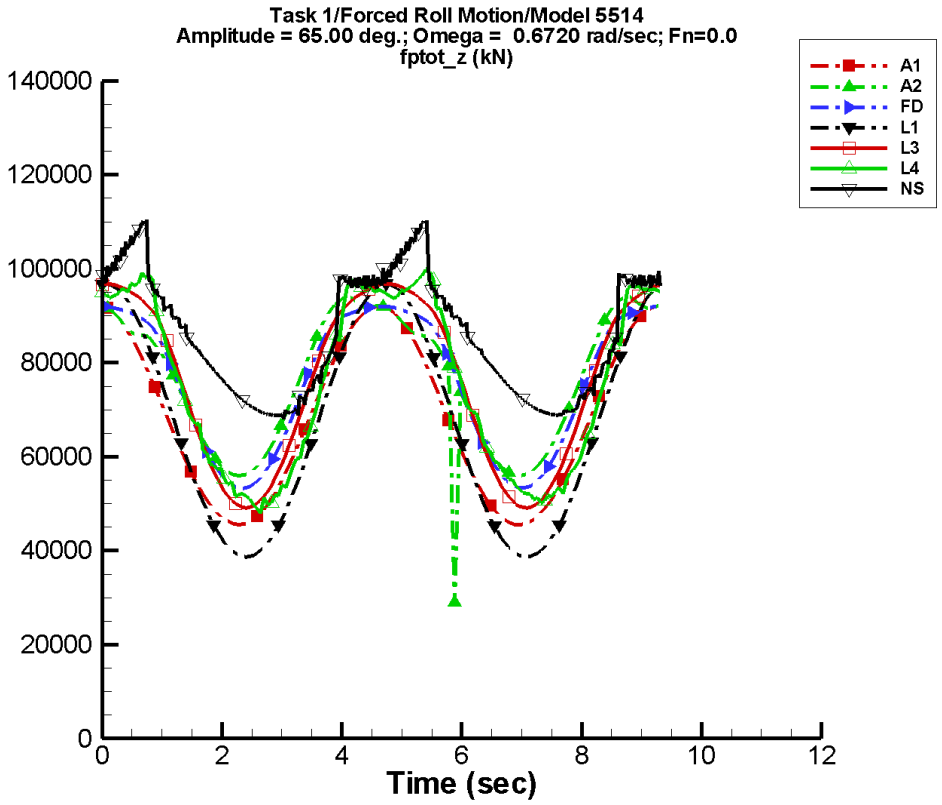
Figure D–104. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–207. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.02E+04 | 4.11 | -128 | 1.17E+04 | 94 |
| A2 | 8.70E+04 | 1.08E+03 | -44 | 4.63E+03 | 102 |
| FD | 8.73E+04 | 98.1 | -29 | 5.64E+03 | 90 |
| L1 | 7.93E+04 | 13.1 | 179 | 1.47E+04 | 85 |
| L3 | 8.71E+04 | 86.3 | 1 | 7.81E+03 | 83 |
| L4 | 8.64E+04 | 153. | -110 | 6.19E+03 | 61 |
| NF | — | — | — | — | — |
| NS | 8.85E+04 | 34.1 | -171 | 8.68E+03 | 63 |

Table D–208. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.86E+04 | 9.20E+04 | 6.91E+04 | 9.14E+04 |
| A2 | 4.23E+04 | 9.27E+04 | 8.14E+04 | 9.22E+04 |
| FD | 8.03E+04 | 9.20E+04 | 8.07E+04 | 9.19E+04 |
| L1 | 6.49E+04 | 9.42E+04 | 6.51E+04 | 9.42E+04 |
| L3 | 7.79E+04 | 9.42E+04 | 7.81E+04 | 9.42E+04 |
| L4 | 7.84E+04 | 9.31E+04 | 7.91E+04 | 9.25E+04 |
| NF | — | — | — | — |
| NS | 7.95E+04 | 9.79E+04 | 7.97E+04 | 9.73E+04 |




Data identically zero, insufficient, or not available from NFA.

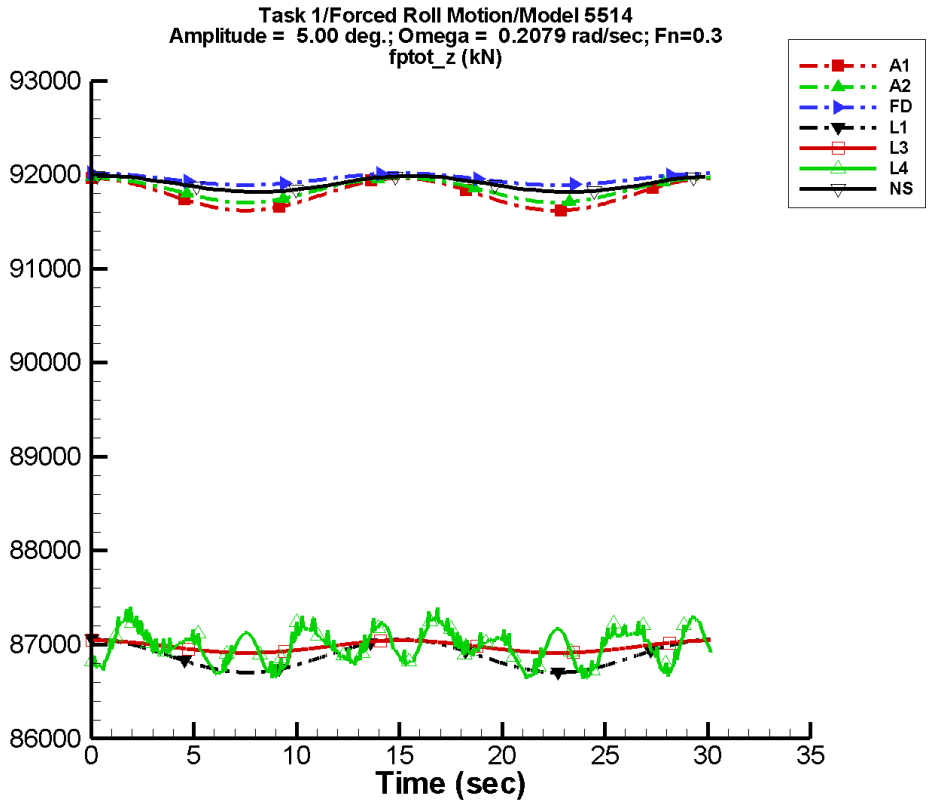
Figure D–105. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–209. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.82E+04 | 25.0 | -149 | 2.33E+04 | 94 |
| A2 | 7.65E+04 | 1.24E+03 | 35 | 1.84E+04 | 102 |
| FD | 7.58E+04 | 219. | -30 | 2.00E+04 | 90 |
| L1 | 6.70E+04 | 53.2 | 179 | 2.91E+04 | 85 |
| L3 | 7.60E+04 | 226. | 0 | 2.42E+04 | 84 |
| L4 | 7.50E+04 | 612. | -130 | 2.49E+04 | 75 |
| NF | — | — | — | — | — |
| NS | 8.57E+04 | 70.9 | 150 | 1.74E+04 | 63 |

Table D–210. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 4.55E+04 | 9.20E+04 | 4.65E+04 | 9.09E+04 |
| A2 | 2.90E+04 | 9.43E+04 | 5.71E+04 | 9.29E+04 |
| FD | 5.33E+04 | 9.20E+04 | 5.43E+04 | 9.20E+04 |
| L1 | 3.87E+04 | 9.68E+04 | 3.91E+04 | 9.67E+04 |
| L3 | 4.91E+04 | 9.67E+04 | 4.96E+04 | 9.68E+04 |
| L4 | 4.80E+04 | 1.00E+05 | 5.00E+04 | 9.75E+04 |
| NF | — | — | — | — |
| NS | 6.81E+04 | 1.11E+05 | 6.88E+04 | 1.09E+05 |




Data identically zero, insufficient, or not available from NFA.

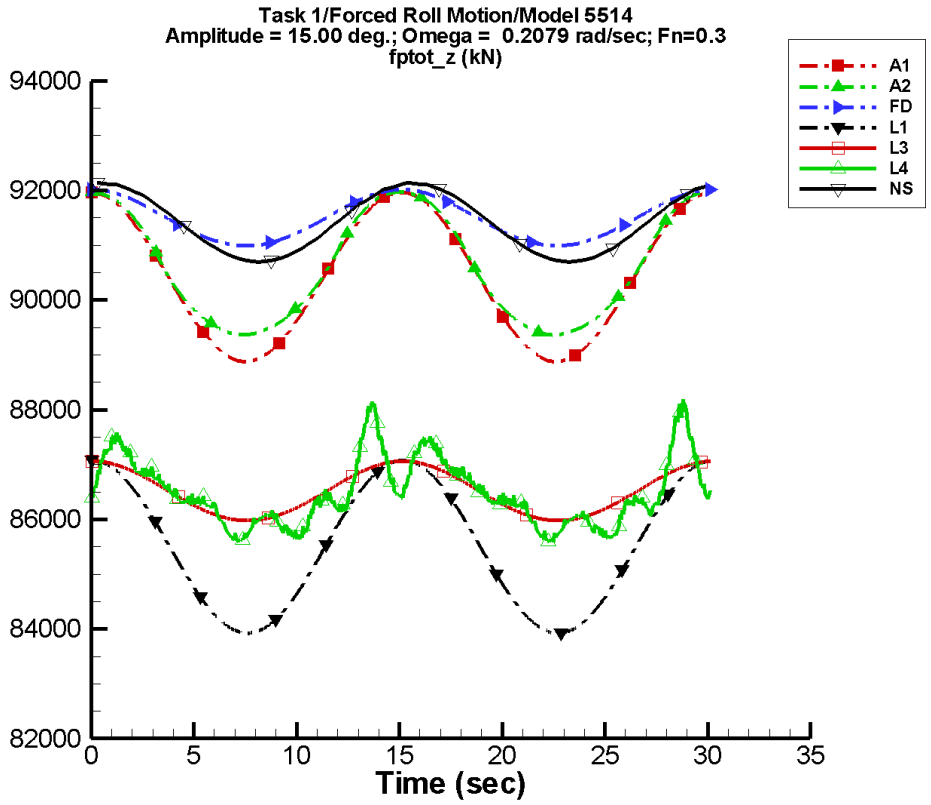
Figure D–106. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–211. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 6.47E-02 | 34 | 172. | 90 |
| A2 | 9.18E+04 | 0.190 | 21 | 133. | 91 |
| FD | 9.20E+04 | 2.66E-02 | -107 | 63.0 | 90 |
| L1 | 8.69E+04 | 8.25E-02 | -169 | 176. | 89 |
| L3 | 8.70E+04 | 0.101 | 161 | 65.9 | 89 |
| L4 | 8.70E+04 | 1.89 | 56 | 69.5 | 79 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 9.53E-02 | -16 | 85.1 | 78 |

Table D–212. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 8.67E+04 | 8.71E+04 | 8.67E+04 | 8.71E+04 |
| L3 | 8.69E+04 | 8.70E+04 | 8.69E+04 | 8.70E+04 |
| L4 | 8.66E+04 | 8.74E+04 | 8.67E+04 | 8.73E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

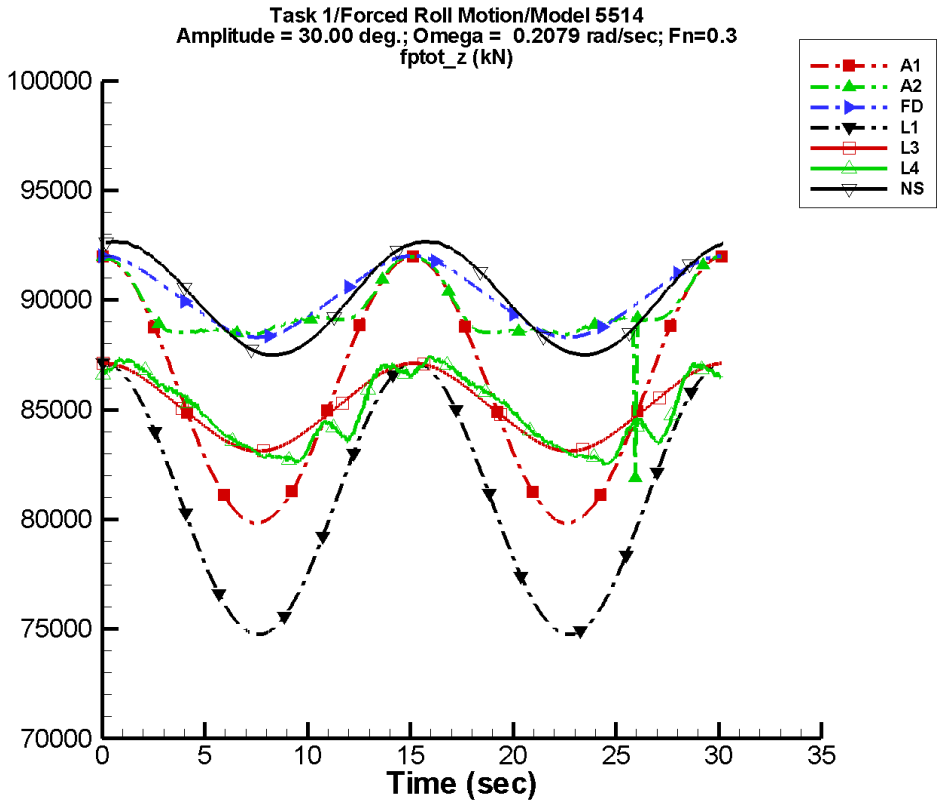
Figure D–107. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–213. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 0.146 | 44 | 1.54E+03 | 90 |
| A2 | 9.06E+04 | 1.48 | -161 | 1.35E+03 | 91 |
| FD | 9.15E+04 | 0.299 | -172 | 511. | 90 |
| L1 | 8.55E+04 | 0.167 | 127 | 1.57E+03 | 89 |
| L3 | 8.65E+04 | 0.858 | 125 | 540. | 89 |
| L4 | 8.65E+04 | 7.41 | -83 | 713. | 77 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 0.528 | -34 | 716. | 76 |

Table D–214. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.89E+04 | 9.20E+04 | 8.89E+04 | 9.20E+04 |
| A2 | 8.94E+04 | 9.20E+04 | 8.94E+04 | 9.20E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.39E+04 | 8.71E+04 | 8.39E+04 | 8.71E+04 |
| L3 | 8.60E+04 | 8.71E+04 | 8.60E+04 | 8.71E+04 |
| L4 | 8.56E+04 | 8.82E+04 | 8.56E+04 | 8.80E+04 |
| NF | — | — | — | — |
| NS | 9.07E+04 | 9.21E+04 | 9.07E+04 | 9.21E+04 |




Data identically zero, insufficient, or not available from NFA.

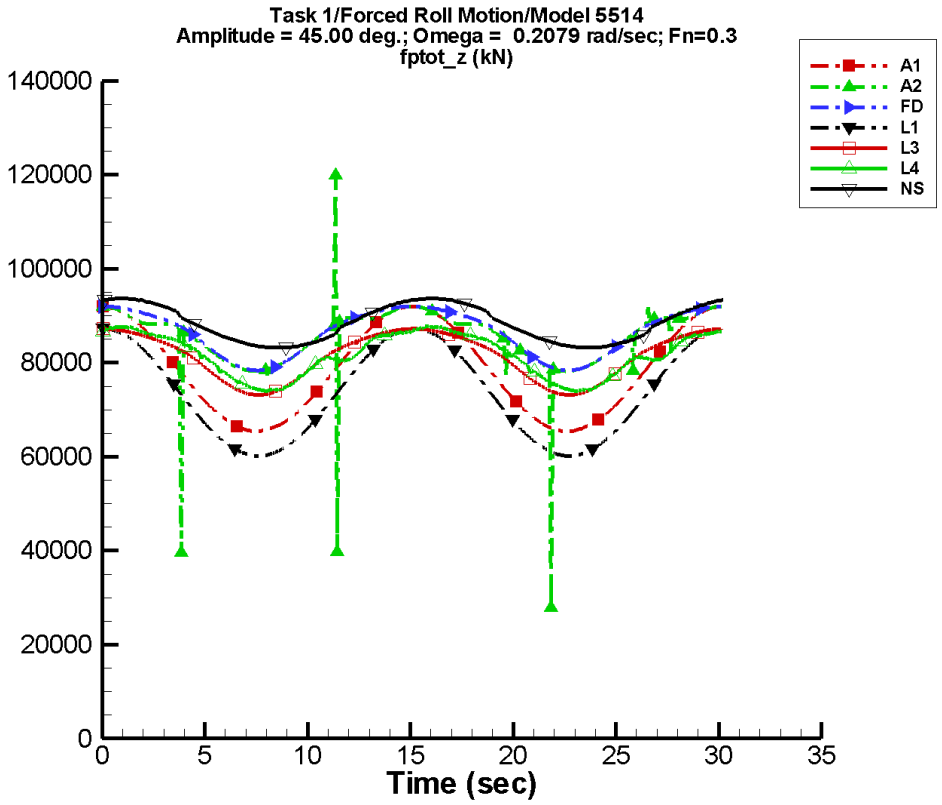
Figure D–108. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–215. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.59E+04 | 0.229 | 160 | 6.07E+03 | 90 |
| A2 | 8.95E+04 | 33.8 | -49 | 1.43E+03 | 101 |
| FD | 9.01E+04 | 0.321 | 93 | 1.81E+03 | 90 |
| L1 | 8.09E+04 | 2.60 | 121 | 6.19E+03 | 89 |
| L3 | 8.51E+04 | 2.37 | 114 | 1.96E+03 | 89 |
| L4 | 8.49E+04 | 19.6 | -105 | 2.13E+03 | 67 |
| NF | — | — | — | — | — |
| NS | 9.01E+04 | 2.84 | -31 | 2.59E+03 | 73 |

Table D–216. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.98E+04 | 9.20E+04 | 7.98E+04 | 9.20E+04 |
| A2 | 8.19E+04 | 9.20E+04 | 8.82E+04 | 9.20E+04 |
| FD | 8.83E+04 | 9.20E+04 | 8.83E+04 | 9.20E+04 |
| L1 | 7.47E+04 | 8.71E+04 | 7.48E+04 | 8.71E+04 |
| L3 | 8.31E+04 | 8.71E+04 | 8.31E+04 | 8.71E+04 |
| L4 | 8.25E+04 | 8.75E+04 | 8.26E+04 | 8.73E+04 |
| NF | — | — | — | — |
| NS | 8.75E+04 | 9.27E+04 | 8.75E+04 | 9.26E+04 |




Data identically zero, insufficient, or not available from NFA.

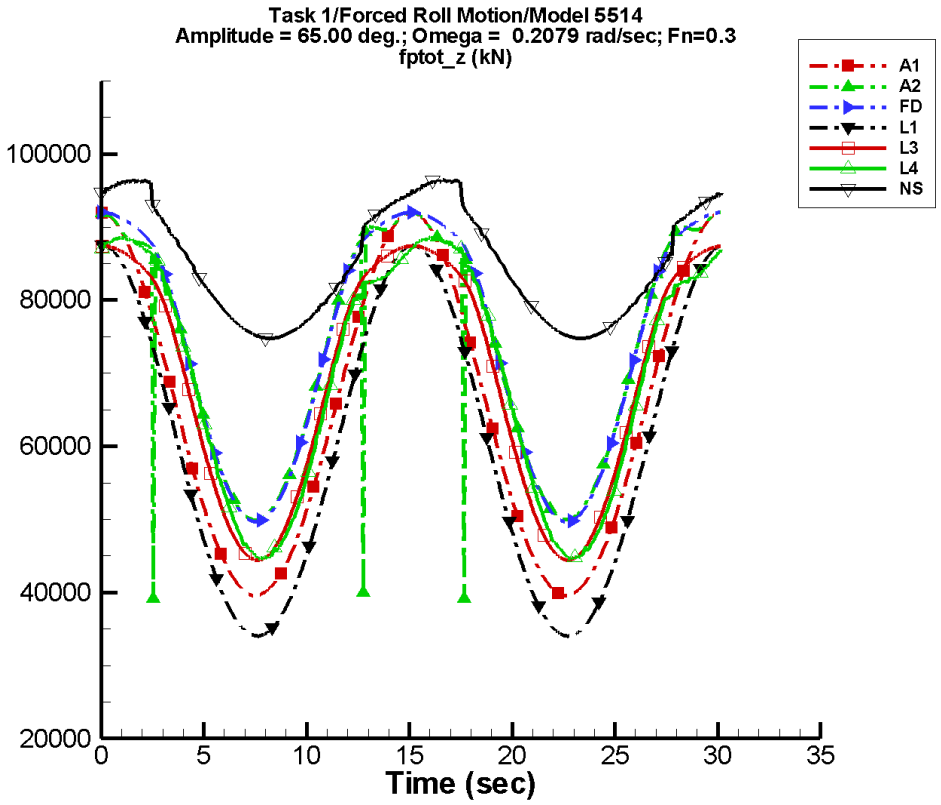
Figure D–109. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–217. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.85E+04 | 1.90 | -165 | 1.33E+04 | 90 |
| A2 | 8.55E+04 | 269. | 0 | 6.49E+03 | 95 |
| FD | 8.63E+04 | 29.9 | 11 | 6.55E+03 | 89 |
| L1 | 7.35E+04 | 12.9 | 120 | 1.35E+04 | 89 |
| L3 | 8.13E+04 | 77.7 | -59 | 6.86E+03 | 89 |
| L4 | 8.17E+04 | 48.4 | -70 | 6.29E+03 | 74 |
| NF | — | — | — | — | — |
| NS | 8.84E+04 | 6.86 | -29 | 5.37E+03 | 70 |

Table D–218. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.54E+04 | 9.20E+04 | 6.54E+04 | 9.20E+04 |
| A2 | 2.79E+04 | 1.20E+05 | 7.21E+04 | 9.20E+04 |
| FD | 7.84E+04 | 9.20E+04 | 7.84E+04 | 9.20E+04 |
| L1 | 6.02E+04 | 8.72E+04 | 6.02E+04 | 8.72E+04 |
| L3 | 7.32E+04 | 8.72E+04 | 7.32E+04 | 8.72E+04 |
| L4 | 7.40E+04 | 8.78E+04 | 7.40E+04 | 8.77E+04 |
| NF | — | — | — | — |
| NS | 8.32E+04 | 9.38E+04 | 8.32E+04 | 9.37E+04 |




Data identically zero, insufficient, or not available from NFA.

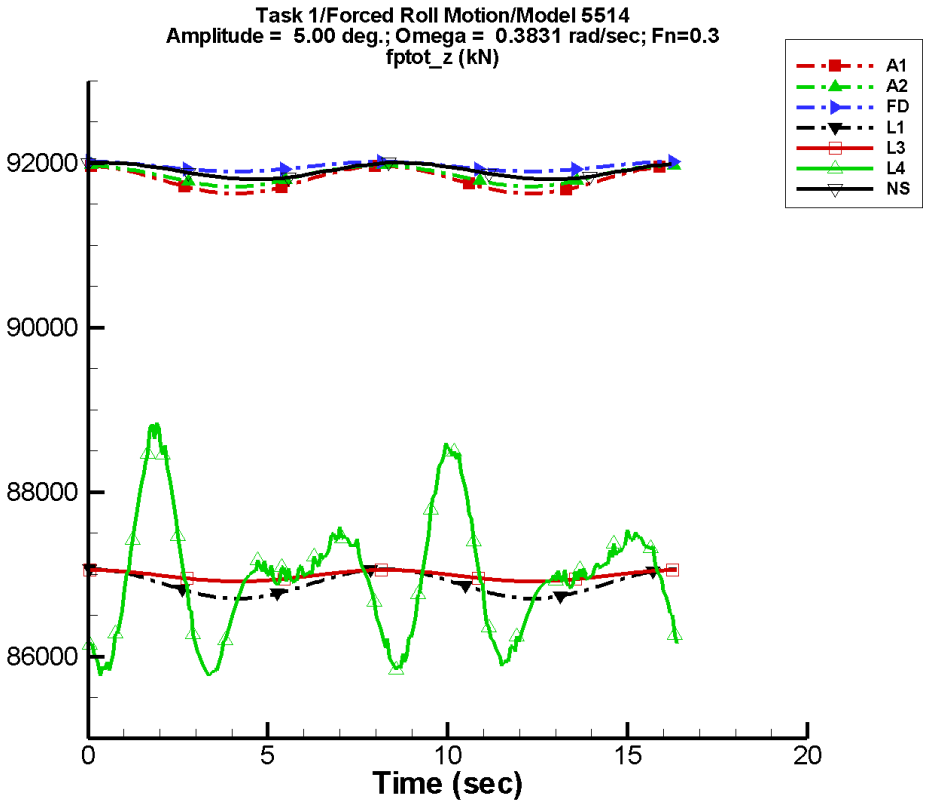
Figure D–110. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–219. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.51E+04 | 9.01 | -160 | 2.62E+04 | 91 |
| A2 | 7.33E+04 | 391. | 95 | 2.07E+04 | 91 |
| FD | 7.39E+04 | 68.5 | 3 | 2.17E+04 | 89 |
| L1 | 6.00E+04 | 54.2 | 119 | 2.66E+04 | 89 |
| L3 | 6.91E+04 | 271. | -61 | 2.23E+04 | 89 |
| L4 | 6.98E+04 | 352. | -70 | 2.22E+04 | 81 |
| NF | — | — | — | — | — |
| NS | 8.51E+04 | 32.4 | -4 | 1.08E+04 | 73 |

Table D–220. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.95E+04 | 9.20E+04 | 3.96E+04 | 9.20E+04 |
| A2 | 3.91E+04 | 9.20E+04 | 5.00E+04 | 9.19E+04 |
| FD | 4.97E+04 | 9.20E+04 | 4.98E+04 | 9.21E+04 |
| L1 | 3.40E+04 | 8.74E+04 | 3.41E+04 | 8.74E+04 |
| L3 | 4.44E+04 | 8.74E+04 | 4.45E+04 | 8.74E+04 |
| L4 | 4.46E+04 | 8.86E+04 | 4.47E+04 | 8.85E+04 |
| NF | — | — | — | — |
| NS | 7.47E+04 | 9.66E+04 | 7.47E+04 | 9.64E+04 |




Data identically zero, insufficient, or not available from NFA.

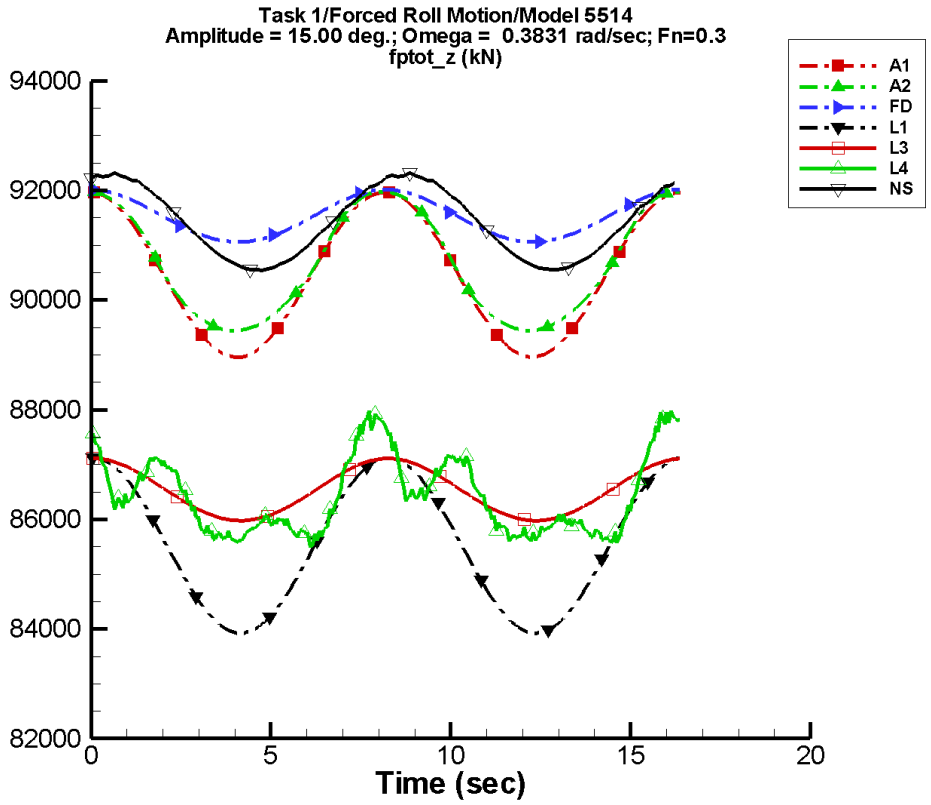
Figure D–111. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–221. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 3.03E-02 | 8 | 168. | 91 |
| A2 | 9.18E+04 | 8.94E-02 | 6 | 129. | 93 |
| FD | 9.20E+04 | 2.96E-02 | 151 | 59.1 | 91 |
| L1 | 8.69E+04 | 3.87E-02 | 82 | 179. | 87 |
| L3 | 8.70E+04 | 4.48E-02 | 111 | 68.7 | 87 |
| L4 | 8.70E+04 | 72.5 | -13 | 184. | 6 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 9.37E-02 | -156 | 101. | 68 |

Table D–222. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 8.67E+04 | 8.71E+04 | 8.67E+04 | 8.71E+04 |
| L3 | 8.69E+04 | 8.71E+04 | 8.69E+04 | 8.71E+04 |
| L4 | 8.57E+04 | 8.89E+04 | 8.58E+04 | 8.87E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

Figure D–112. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–223. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.05E+04 | 9.60E-02 | -146 | 1.51E+03 | 91 |
| A2 | 9.06E+04 | 1.05 | -131 | 1.31E+03 | 93 |
| FD | 9.15E+04 | 0.594 | 118 | 476. | 91 |
| L1 | 8.55E+04 | 0.144 | 151 | 1.60E+03 | 87 |
| L3 | 8.65E+04 | 0.574 | 161 | 565. | 87 |
| L4 | 8.64E+04 | 52.4 | -101 | 742. | 72 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 1.34 | -162 | 870. | 66 |

Table D–224. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.90E+04 | 9.20E+04 | 8.89E+04 | 9.20E+04 |
| A2 | 8.94E+04 | 9.20E+04 | 8.94E+04 | 9.20E+04 |
| FD | 9.11E+04 | 9.20E+04 | 9.11E+04 | 9.20E+04 |
| L1 | 8.39E+04 | 8.71E+04 | 8.39E+04 | 8.71E+04 |
| L3 | 8.60E+04 | 8.71E+04 | 8.60E+04 | 8.71E+04 |
| L4 | 8.55E+04 | 8.80E+04 | 8.56E+04 | 8.79E+04 |
| NF | — | — | — | — |
| NS | 9.05E+04 | 9.23E+04 | 9.06E+04 | 9.23E+04 |

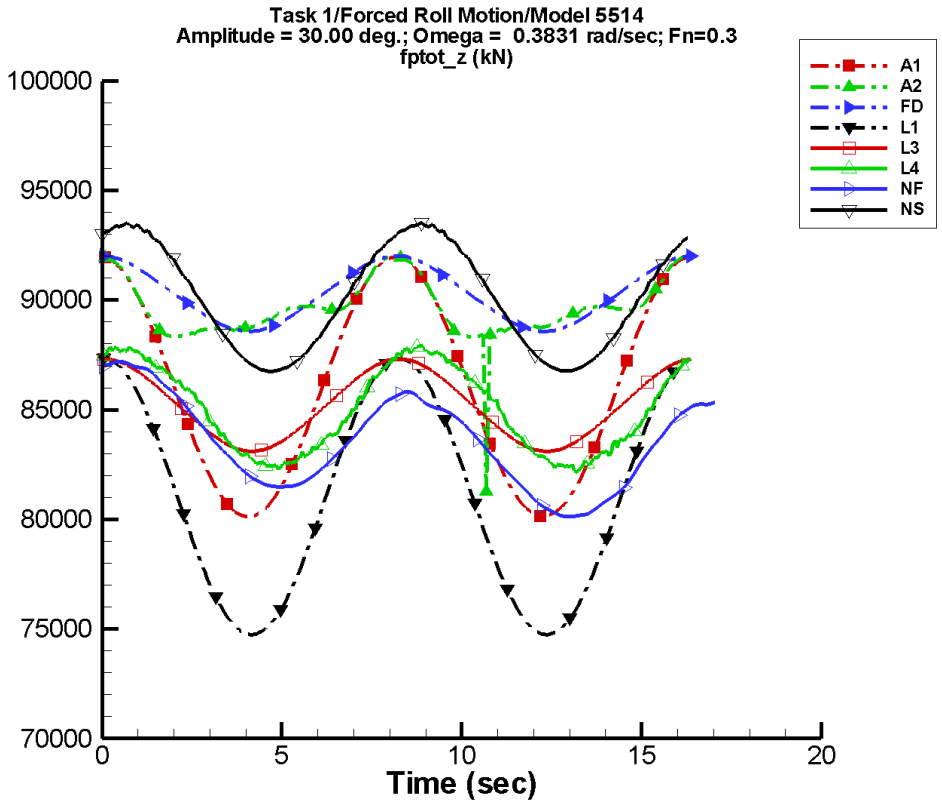



Figure D–113. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–225. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.60E+04 | 0.736 | -150 | 5.92E+03 | 91 |
| A2 | 8.97E+04 | 88.4 | 41 | 1.44E+03 | 117 |
| FD | 9.03E+04 | 0.425 | -44 | 1.68E+03 | 91 |
| L1 | 8.10E+04 | 1.72 | 162 | 6.29E+03 | 87 |
| L3 | 8.52E+04 | 2.46 | -164 | 2.06E+03 | 87 |
| L4 | 8.50E+04 | 35.6 | -78 | 2.68E+03 | 57 |
| NF | 8.34E+04 | 949. | 54 | 2.52E+03 | 128 |
| NS | 9.01E+04 | 5.91 | -161 | 3.33E+03 | 62 |

Table D–226. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.01E+04 | 9.20E+04 | 8.01E+04 | 9.19E+04 |
| A2 | 8.13E+04 | 9.20E+04 | 8.75E+04 | 9.19E+04 |
| FD | 8.86E+04 | 9.20E+04 | 8.86E+04 | 9.20E+04 |
| L1 | 7.47E+04 | 8.73E+04 | 7.48E+04 | 8.73E+04 |
| L3 | 8.31E+04 | 8.73E+04 | 8.31E+04 | 8.73E+04 |
| L4 | 8.22E+04 | 8.80E+04 | 8.23E+04 | 8.78E+04 |
| NF | 8.01E+04 | 8.72E+04 | 8.02E+04 | 8.71E+04 |
| NS | 8.68E+04 | 9.36E+04 | 8.68E+04 | 9.34E+04 |

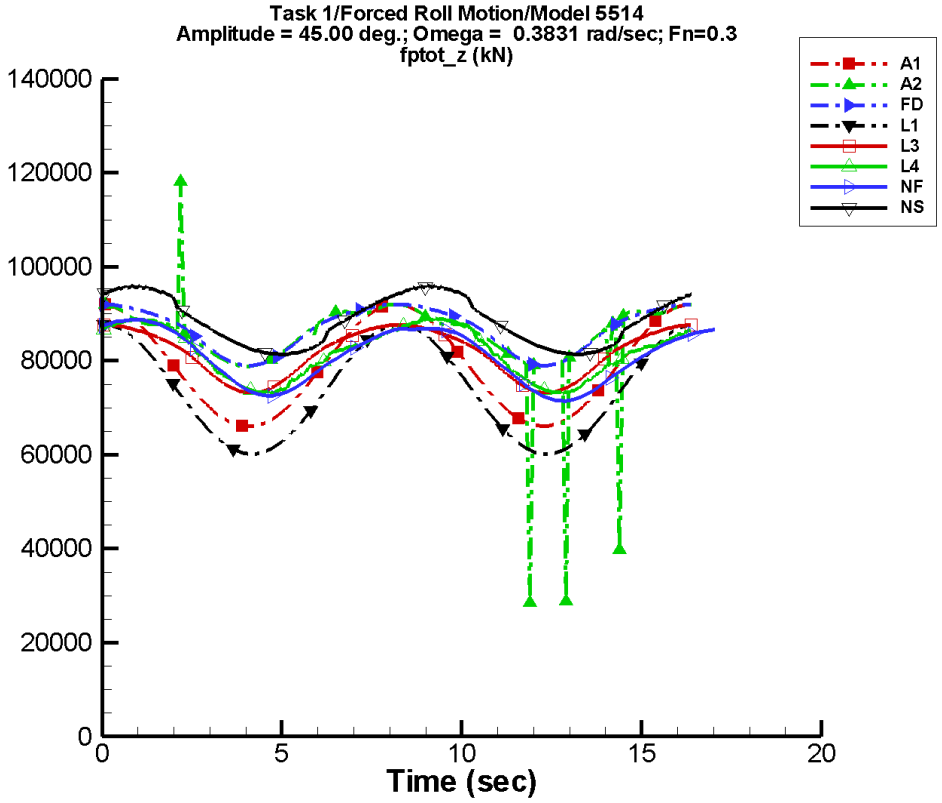



Figure D–114. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–227. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.88E+04 | 2.25 | -126 | 1.30E+04 | 91 |
| A2 | 8.52E+04 | 1.87E+03 | -14 | 6.97E+03 | 89 |
| FD | 8.67E+04 | 70.5 | -59 | 6.36E+03 | 90 |
| L1 | 7.37E+04 | 7.90 | 162 | 1.38E+04 | 87 |
| L3 | 8.15E+04 | 45.1 | -27 | 6.94E+03 | 87 |
| L4 | 8.16E+04 | 71.0 | -30 | 7.28E+03 | 63 |
| NF | 8.07E+04 | 1.10E+03 | 67 | 7.36E+03 | 135 |
| NS | 8.85E+04 | 14.5 | -159 | 7.23E+03 | 59 |

Table D–228. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.60E+04 | 9.20E+04 | 6.60E+04 | 9.18E+04 |
| A2 | 2.85E+04 | 1.18E+05 | 7.31E+04 | 9.19E+04 |
| FD | 7.89E+04 | 9.20E+04 | 7.91E+04 | 9.20E+04 |
| L1 | 6.01E+04 | 8.77E+04 | 6.02E+04 | 8.77E+04 |
| L3 | 7.31E+04 | 8.76E+04 | 7.32E+04 | 8.77E+04 |
| L4 | 7.30E+04 | 8.90E+04 | 7.32E+04 | 8.88E+04 |
| NF | 7.15E+04 | 8.87E+04 | 7.17E+04 | 8.85E+04 |
| NS | 8.13E+04 | 9.61E+04 | 8.14E+04 | 9.59E+04 |

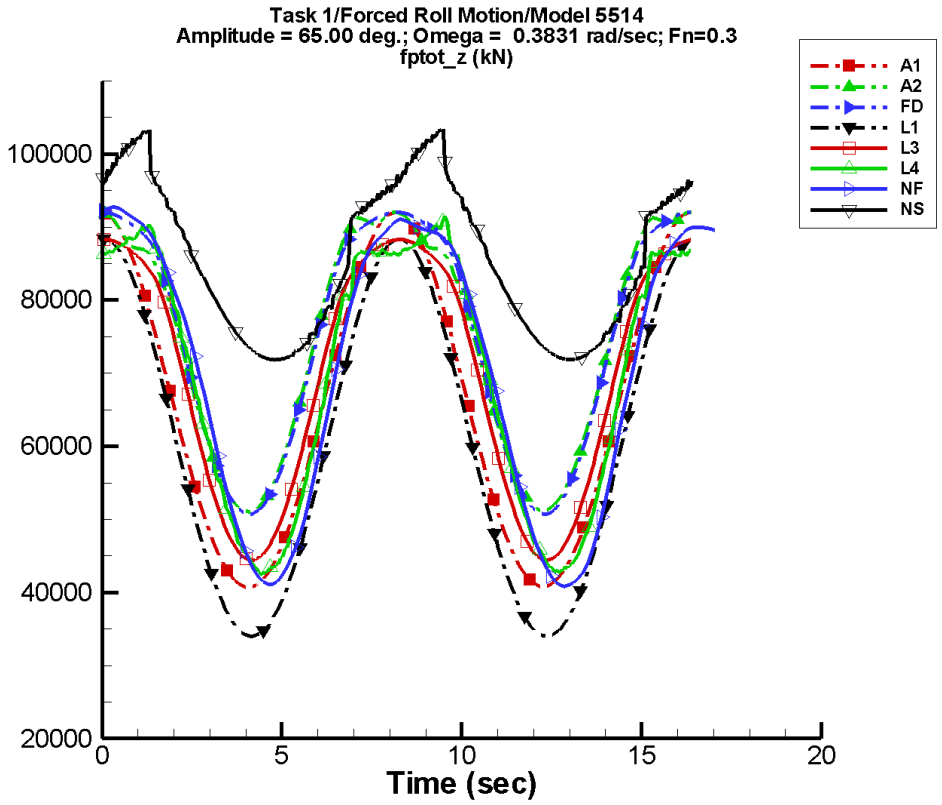


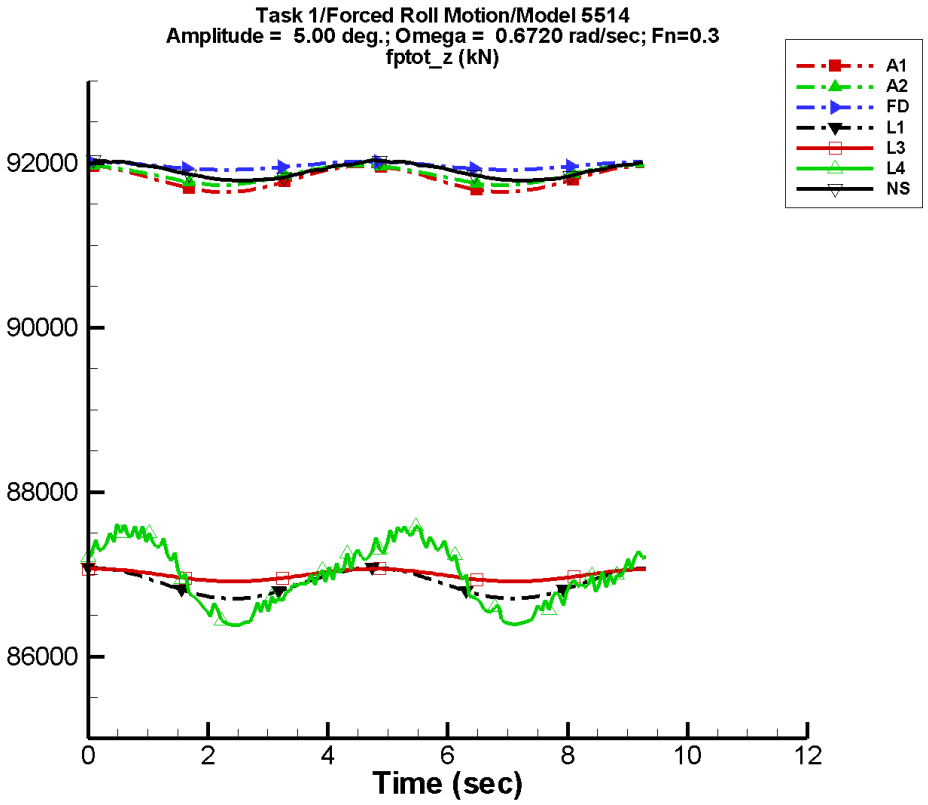

Figure D–115. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–229. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.57E+04 | 8.08 | -100 | 2.56E+04 | 92 |
| A2 | 7.43E+04 | 20.7 | -14 | 2.06E+04 | 93 |
| FD | 7.45E+04 | 140. | -61 | 2.14E+04 | 90 |
| L1 | 6.04E+04 | 33.0 | 162 | 2.72E+04 | 87 |
| L3 | 6.94E+04 | 171. | -9 | 2.23E+04 | 86 |
| L4 | 6.95E+04 | 339. | -84 | 2.34E+04 | 74 |
| NF | 6.97E+04 | 1.74E+03 | 103 | 2.46E+04 | 142 |
| NS | 8.55E+04 | 11.9 | 160 | 1.44E+04 | 62 |

Table D–230. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 4.07E+04 | 9.20E+04 | 4.06E+04 | 9.17E+04 |
| A2 | 5.11E+04 | 9.20E+04 | 5.10E+04 | 9.16E+04 |
| FD | 5.07E+04 | 9.20E+04 | 5.11E+04 | 9.19E+04 |
| L1 | 3.40E+04 | 8.83E+04 | 3.41E+04 | 8.83E+04 |
| L3 | 4.44E+04 | 8.83E+04 | 4.46E+04 | 8.83E+04 |
| L4 | 4.24E+04 | 9.15E+04 | 4.29E+04 | 9.02E+04 |
| NF | 4.08E+04 | 9.28E+04 | 4.15E+04 | 9.24E+04 |
| NS | 7.18E+04 | 1.03E+05 | 7.18E+04 | 1.03E+05 |




Data identically zero, insufficient, or not available from NFA.

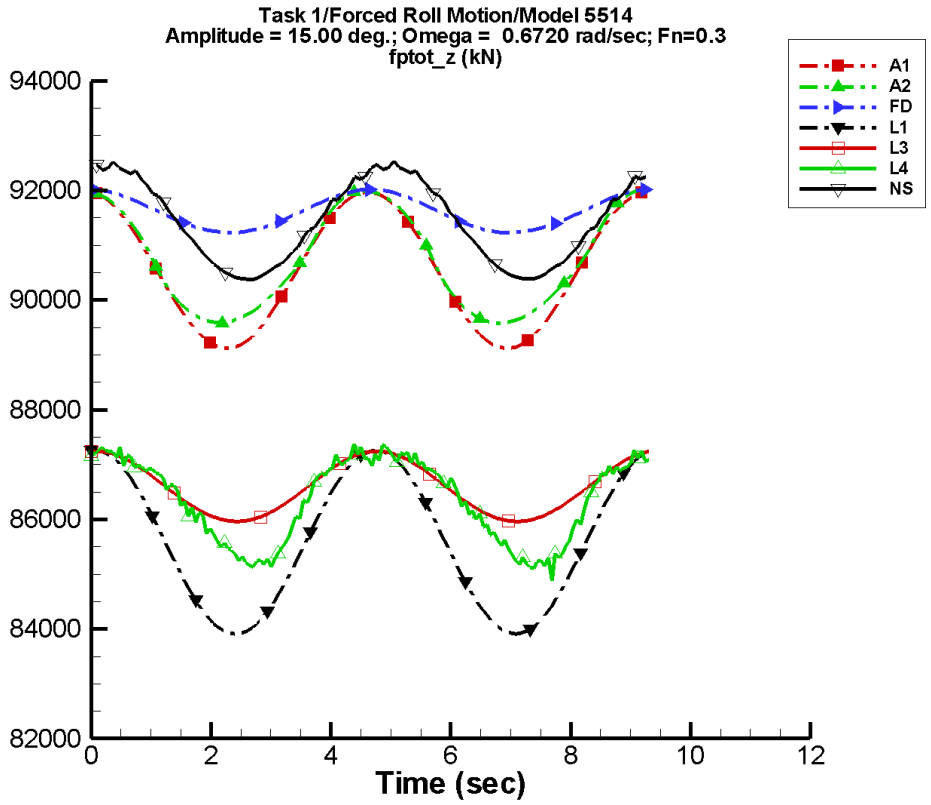
Figure D–116. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–231. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 0.121 | -24 | 159. | 95 |
| A2 | 9.19E+04 | 0.590 | -4 | 121. | 99 |
| FD | 9.20E+04 | 7.35E-02 | 156 | 49.6 | 91 |
| L1 | 8.69E+04 | 1.29E-02 | 85 | 187. | 84 |
| L3 | 8.70E+04 | 6.70E-02 | 178 | 76.9 | 83 |
| L4 | 8.70E+04 | 16.9 | 12 | 493. | 57 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 0.362 | -171 | 118. | 70 |

Table D–232. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 8.67E+04 | 8.71E+04 | 8.67E+04 | 8.71E+04 |
| L3 | 8.69E+04 | 8.71E+04 | 8.69E+04 | 8.71E+04 |
| L4 | 8.64E+04 | 8.76E+04 | 8.64E+04 | 8.75E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

Figure D–117. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–233. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.05E+04 | 0.768 | 18 | 1.43E+03 | 95 |
| A2 | 9.07E+04 | 7.05 | -178 | 1.25E+03 | 97 |
| FD | 9.16E+04 | 0.852 | 151 | 391. | 91 |
| L1 | 8.56E+04 | 0.254 | 175 | 1.67E+03 | 84 |
| L3 | 8.66E+04 | 0.824 | 179 | 640. | 83 |
| L4 | 8.64E+04 | 35.9 | -56 | 999. | 70 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 3.68 | -175 | 1.04E+03 | 69 |

Table D–234. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.91E+04 | 9.20E+04 | 8.92E+04 | 9.19E+04 |
| A2 | 8.96E+04 | 9.20E+04 | 8.96E+04 | 9.19E+04 |
| FD | 9.12E+04 | 9.20E+04 | 9.12E+04 | 9.20E+04 |
| L1 | 8.39E+04 | 8.73E+04 | 8.39E+04 | 8.73E+04 |
| L3 | 8.60E+04 | 8.72E+04 | 8.60E+04 | 8.72E+04 |
| L4 | 8.49E+04 | 8.74E+04 | 8.52E+04 | 8.72E+04 |
| NF | — | — | — | — |
| NS | 9.04E+04 | 9.25E+04 | 9.04E+04 | 9.24E+04 |

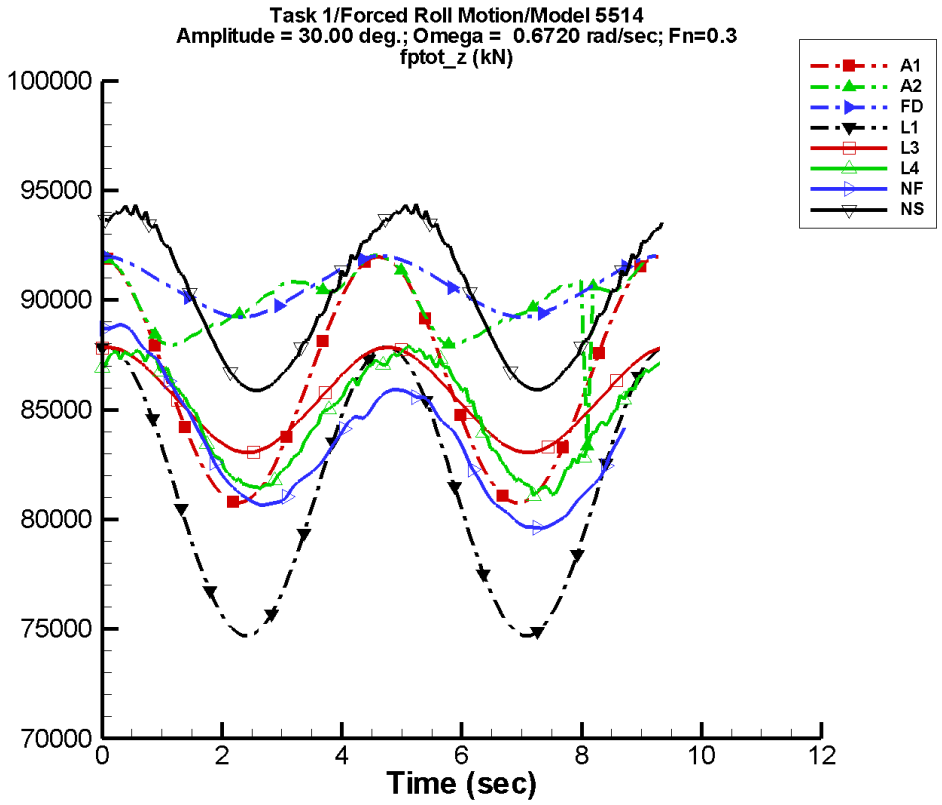



Figure D–118. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–235. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.63E+04 | 1.81 | 35 | 5.62E+03 | 95 |
| A2 | 8.99E+04 | 122. | -50 | 1.49E+03 | 136 |
| FD | 9.06E+04 | 0.730 | -24 | 1.35E+03 | 92 |
| L1 | 8.12E+04 | 2.87 | 179 | 6.58E+03 | 84 |
| L3 | 8.54E+04 | 0.860 | 174 | 2.36E+03 | 83 |
| L4 | 8.48E+04 | 112. | -58 | 3.10E+03 | 64 |
| NF | 8.34E+04 | 89.5 | -155 | 3.00E+03 | -35 |
| NS | 9.01E+04 | 17.1 | -176 | 4.06E+03 | 65 |

Table D–236. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.07E+04 | 9.20E+04 | 8.10E+04 | 9.17E+04 |
| A2 | 8.33E+04 | 9.21E+04 | 8.82E+04 | 9.18E+04 |
| FD | 8.92E+04 | 9.20E+04 | 8.93E+04 | 9.20E+04 |
| L1 | 7.47E+04 | 8.79E+04 | 7.48E+04 | 8.79E+04 |
| L3 | 8.30E+04 | 8.78E+04 | 8.31E+04 | 8.78E+04 |
| L4 | 8.11E+04 | 8.79E+04 | 8.13E+04 | 8.77E+04 |
| NF | 7.96E+04 | 8.73E+04 | 7.96E+04 | 8.72E+04 |
| NS | 8.59E+04 | 9.44E+04 | 8.59E+04 | 9.41E+04 |

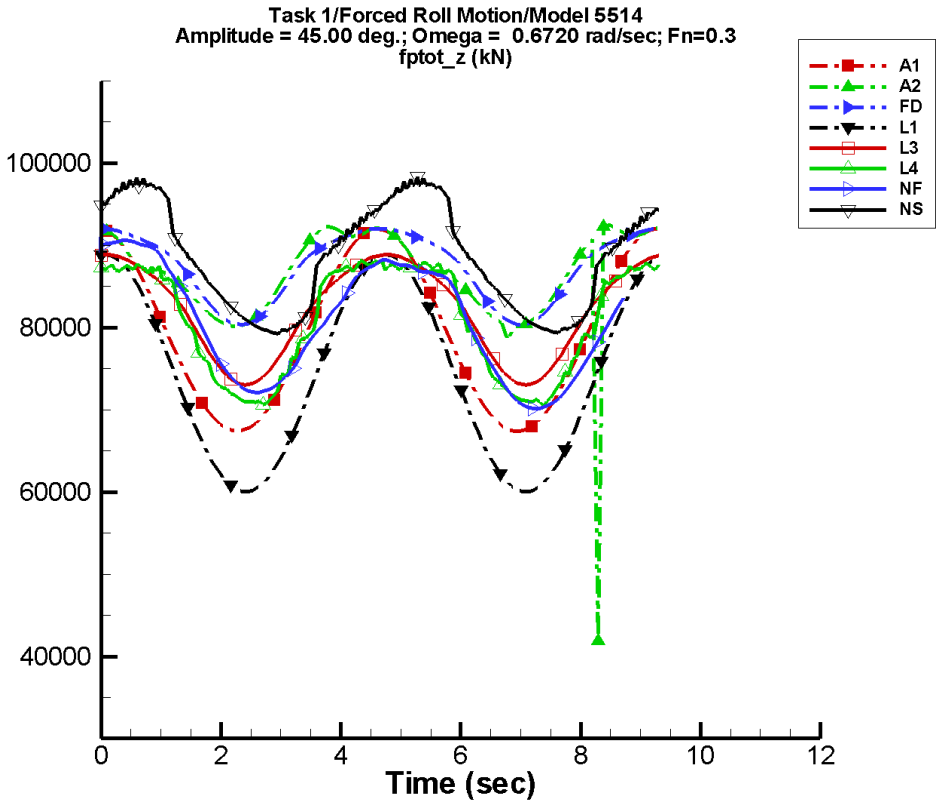



Figure D–119. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–237. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.95E+04 | 1.79 | 151 | 1.23E+04 | 95 |
| A2 | 8.64E+04 | 1.08E+03 | -44 | 5.28E+03 | 102 |
| FD | 8.73E+04 | 98.1 | -29 | 5.64E+03 | 90 |
| L1 | 7.43E+04 | 13.1 | 179 | 1.44E+04 | 84 |
| L3 | 8.21E+04 | 86.3 | 1 | 7.58E+03 | 83 |
| L4 | 8.09E+04 | 297. | -63 | 8.78E+03 | 78 |
| NF | 8.07E+04 | 584. | 94 | 8.83E+03 | -33 |
| NS | 8.86E+04 | 36.9 | -175 | 8.90E+03 | 59 |

Table D–238. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.74E+04 | 9.20E+04 | 6.79E+04 | 9.14E+04 |
| A2 | 4.19E+04 | 9.24E+04 | 8.01E+04 | 9.22E+04 |
| FD | 8.03E+04 | 9.20E+04 | 8.07E+04 | 9.19E+04 |
| L1 | 6.00E+04 | 8.89E+04 | 6.02E+04 | 8.89E+04 |
| L3 | 7.30E+04 | 8.88E+04 | 7.32E+04 | 8.89E+04 |
| L4 | 7.04E+04 | 8.82E+04 | 7.09E+04 | 8.77E+04 |
| NF | 7.01E+04 | 9.03E+04 | 7.03E+04 | 9.02E+04 |
| NS | 7.92E+04 | 9.84E+04 | 7.94E+04 | 9.77E+04 |

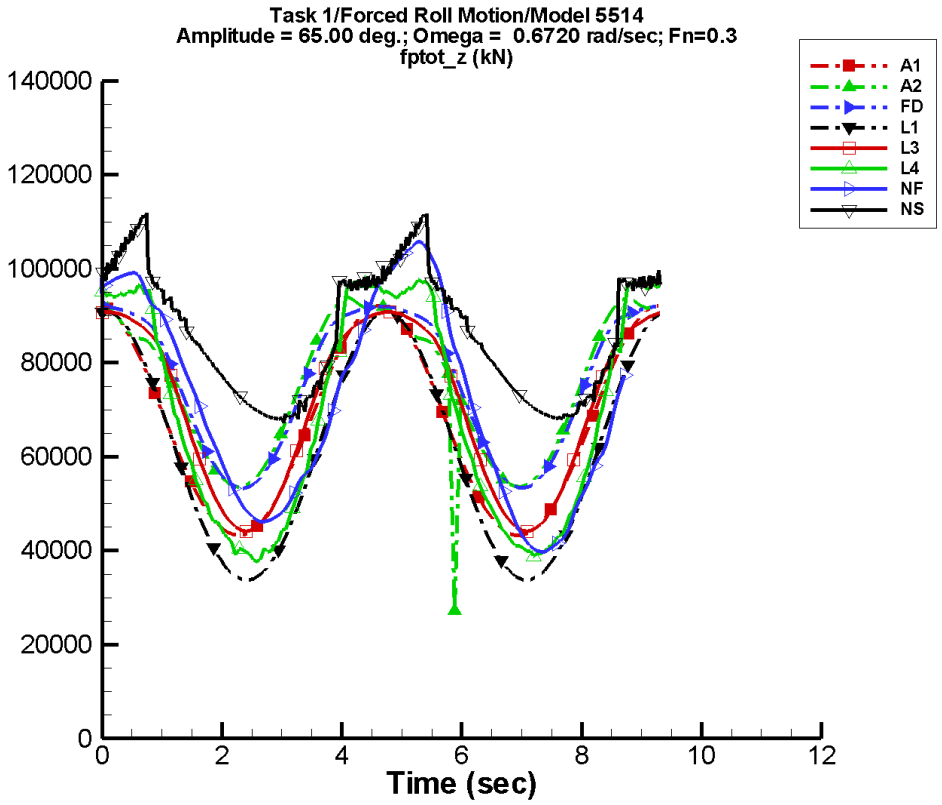


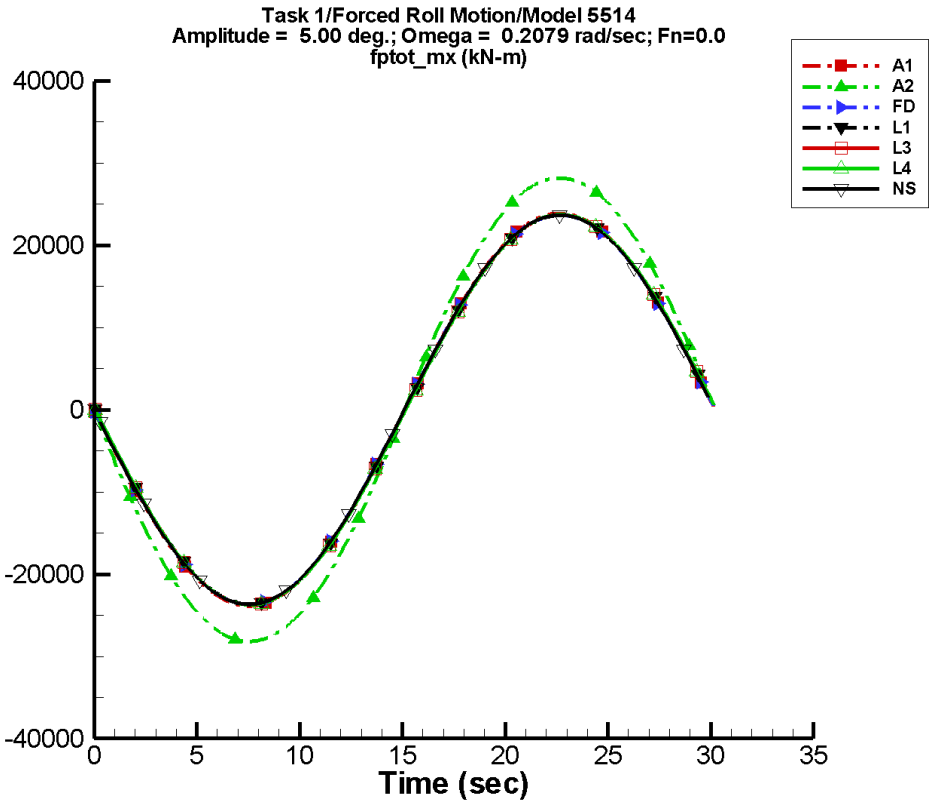

Figure D–120. Time history of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–239. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.70E+04 | 22.6 | -167 | 2.45E+04 | 95 |
| A2 | 7.53E+04 | 1.25E+03 | 36 | 1.96E+04 | 102 |
| FD | 7.58E+04 | 219. | -30 | 2.00E+04 | 90 |
| L1 | 6.15E+04 | 53.2 | 179 | 2.86E+04 | 84 |
| L3 | 7.06E+04 | 226. | 0 | 2.37E+04 | 83 |
| L4 | 6.89E+04 | 700. | -125 | 3.12E+04 | 81 |
| NF | 7.27E+04 | 2.38E+03 | 75 | 3.15E+04 | -42 |
| NS | 8.60E+04 | 81.5 | 161 | 1.81E+04 | 59 |

Table D–240. Minimum and maximum of of $F_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 4.32E+04 | 9.21E+04 | 4.42E+04 | 9.08E+04 |
| A2 | 2.72E+04 | 9.41E+04 | 5.48E+04 | 9.28E+04 |
| FD | 5.33E+04 | 9.20E+04 | 5.43E+04 | 9.20E+04 |
| L1 | 3.37E+04 | 9.08E+04 | 3.42E+04 | 9.08E+04 |
| L3 | 4.41E+04 | 9.08E+04 | 4.46E+04 | 9.09E+04 |
| L4 | 3.77E+04 | 9.77E+04 | 3.90E+04 | 9.69E+04 |
| NF | 3.97E+04 | 1.08E+05 | 4.03E+04 | 1.06E+05 |
| NS | 6.72E+04 | 1.12E+05 | 6.81E+04 | 1.10E+05 |




Data identically zero, insufficient, or not available from NFA.

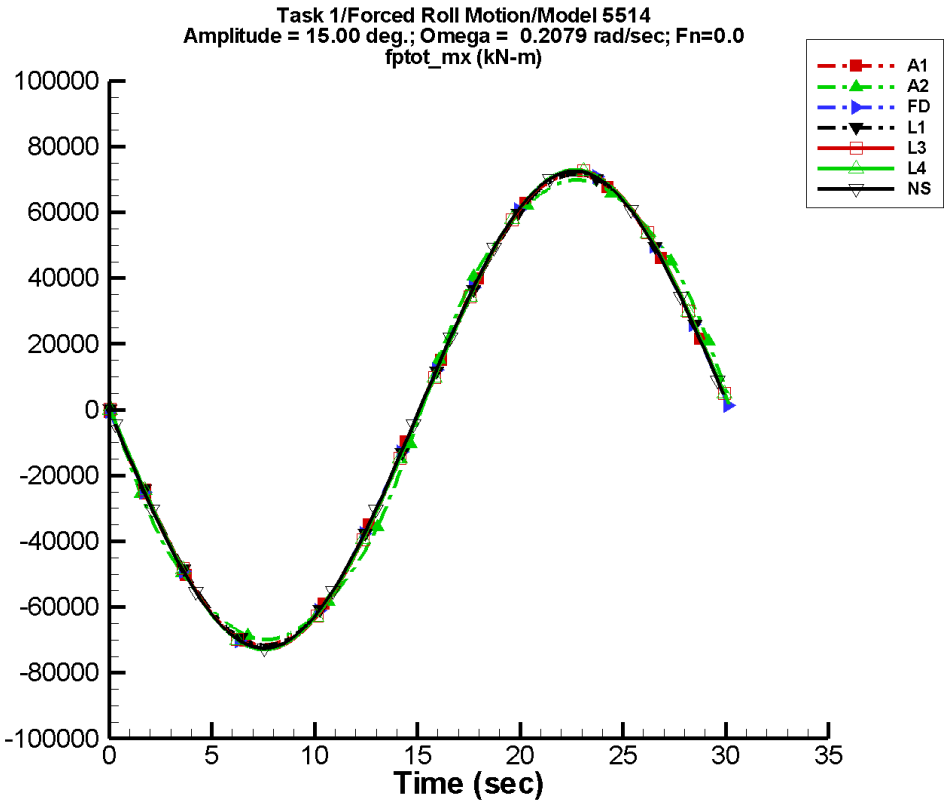
Figure D–121. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–241. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.355 | 2.39E+04 | 180 | 0.201 | 16 |
| A2 | -12.2 | 2.85E+04 | -180 | 63.6 | -116 |
| FD | 0.256 | 2.37E+04 | -180 | 1.14 | 54 |
| L1 | 0.432 | 2.36E+04 | 179 | 1.61 | 88 |
| L3 | 1.65 | 2.37E+04 | 179 | 6.13 | 86 |
| L4 | 1.82 | 2.37E+04 | 179 | 6.21 | 92 |
| NF | — | — | — | — | — |
| NS | -1.09E-02 | 2.37E+04 | -180 | 8.72E-03 | 3 |

Table D–242. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.39E+04 | 2.39E+04 | -2.39E+04 | 2.38E+04 |
| A2 | -2.82E+04 | 2.82E+04 | -2.82E+04 | 2.82E+04 |
| FD | -2.37E+04 | 2.37E+04 | -2.36E+04 | 2.36E+04 |
| L1 | -2.37E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| L3 | -2.37E+04 | 2.37E+04 | -2.37E+04 | 2.37E+04 |
| L4 | -2.37E+04 | 2.37E+04 | -2.37E+04 | 2.37E+04 |
| NF | — | — | — | — |
| NS | -2.37E+04 | 2.37E+04 | -2.34E+04 | 2.34E+04 |




Data identically zero, insufficient, or not available from NFA.

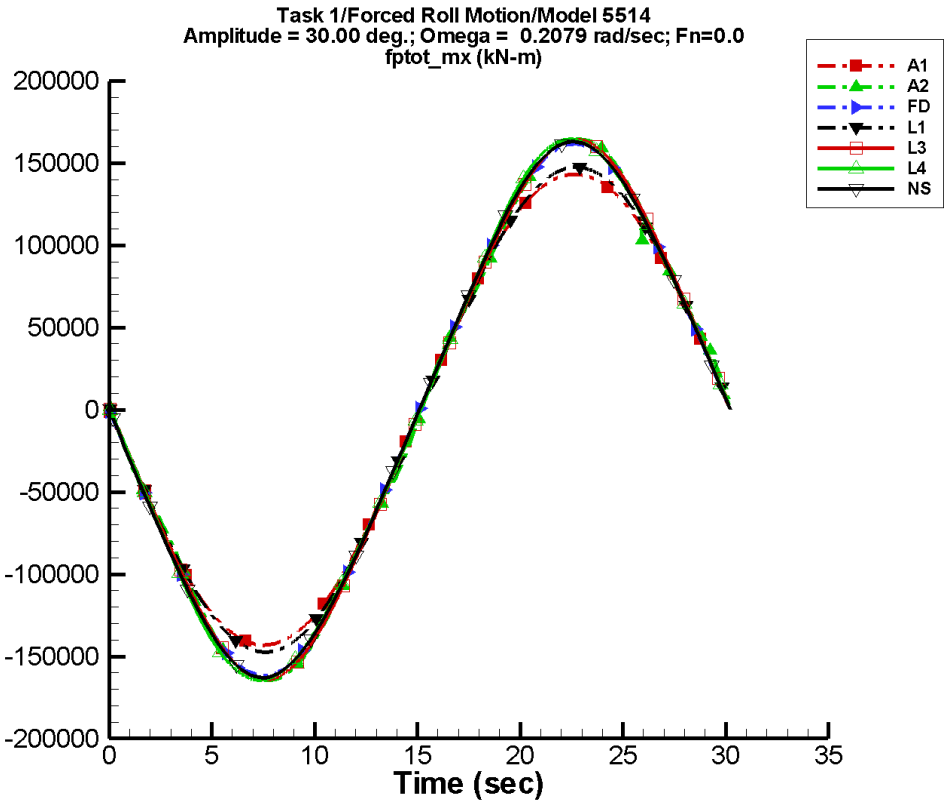
Figure D–122. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–243. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.07 | 7.16E+04 | 180 | 0.604 | 17 |
| A2 | -118. | 7.21E+04 | 179 | 587. | -116 |
| FD | 13.9 | 7.21E+04 | 180 | 70.6 | 56 |
| L1 | 10.9 | 7.14E+04 | 179 | 42.9 | 87 |
| L3 | 28.1 | 7.24E+04 | 179 | 110. | 87 |
| L4 | 35.4 | 7.25E+04 | 179 | 132. | 104 |
| NF | — | — | — | — | — |
| NS | -0.275 | 7.21E+04 | -180 | 0.206 | 65 |

Table D–244. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.16E+04 | 7.16E+04 | -7.16E+04 | 7.15E+04 |
| A2 | -6.99E+04 | 6.99E+04 | -6.98E+04 | 6.98E+04 |
| FD | -7.27E+04 | 7.27E+04 | -7.26E+04 | 7.26E+04 |
| L1 | -7.16E+04 | 7.16E+04 | -7.16E+04 | 7.16E+04 |
| L3 | -7.29E+04 | 7.29E+04 | -7.29E+04 | 7.29E+04 |
| L4 | -7.29E+04 | 7.29E+04 | -7.29E+04 | 7.29E+04 |
| NF | — | — | — | — |
| NS | -7.25E+04 | 7.25E+04 | -7.18E+04 | 7.18E+04 |




Data identically zero, insufficient, or not available from NFA.

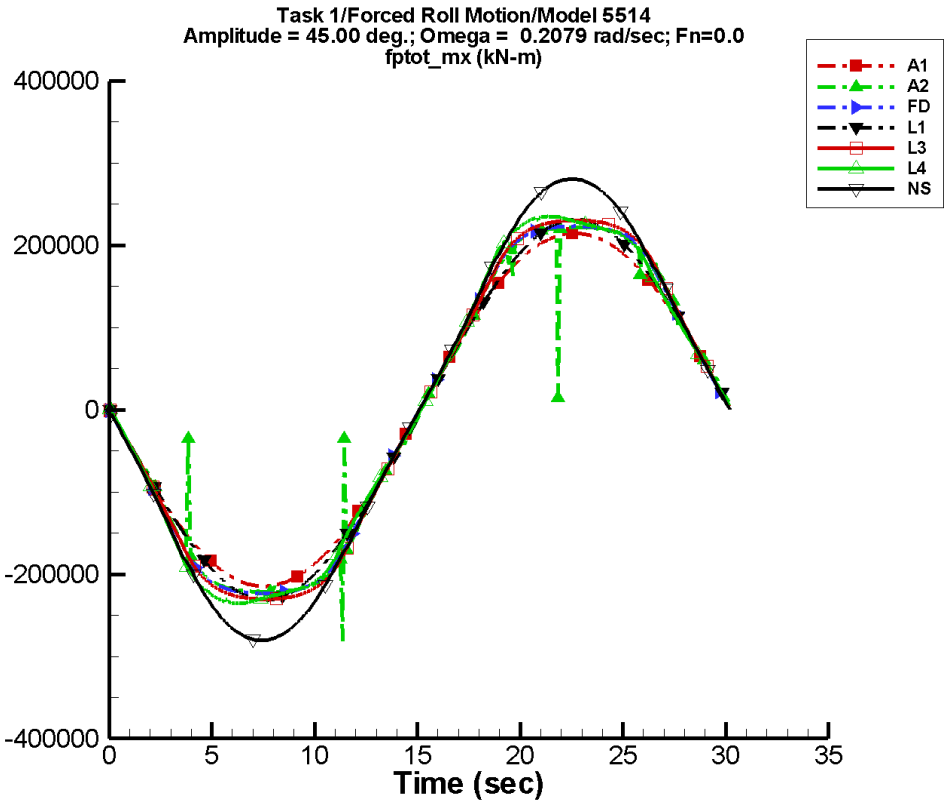
Figure D–123. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–245. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.12 | 1.43E+05 | 180 | 1.21 | 16 |
| A2 | 23.6 | 1.58E+05 | 179 | 1.03E+03 | 41 |
| FD | 156. | 1.56E+05 | 180 | 798. | 57 |
| L1 | 86.0 | 1.46E+05 | 179 | 339. | 87 |
| L3 | 365. | 1.58E+05 | 179 | 1.44E+03 | 87 |
| L4 | 457. | 1.58E+05 | -180 | 1.68E+03 | 105 |
| NF | — | — | — | — | — |
| NS | -3.14 | 1.57E+05 | -180 | 2.76 | 75 |

Table D–246. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.43E+05 | 1.43E+05 | -1.43E+05 | 1.43E+05 |
| A2 | -1.65E+05 | 1.65E+05 | -1.65E+05 | 1.64E+05 |
| FD | -1.62E+05 | 1.62E+05 | -1.61E+05 | 1.61E+05 |
| L1 | -1.47E+05 | 1.47E+05 | -1.47E+05 | 1.47E+05 |
| L3 | -1.64E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| L4 | -1.64E+05 | 1.65E+05 | -1.64E+05 | 1.64E+05 |
| NF | — | — | — | — |
| NS | -1.63E+05 | 1.63E+05 | -1.62E+05 | 1.62E+05 |




Data identically zero, insufficient, or not available from NFA.

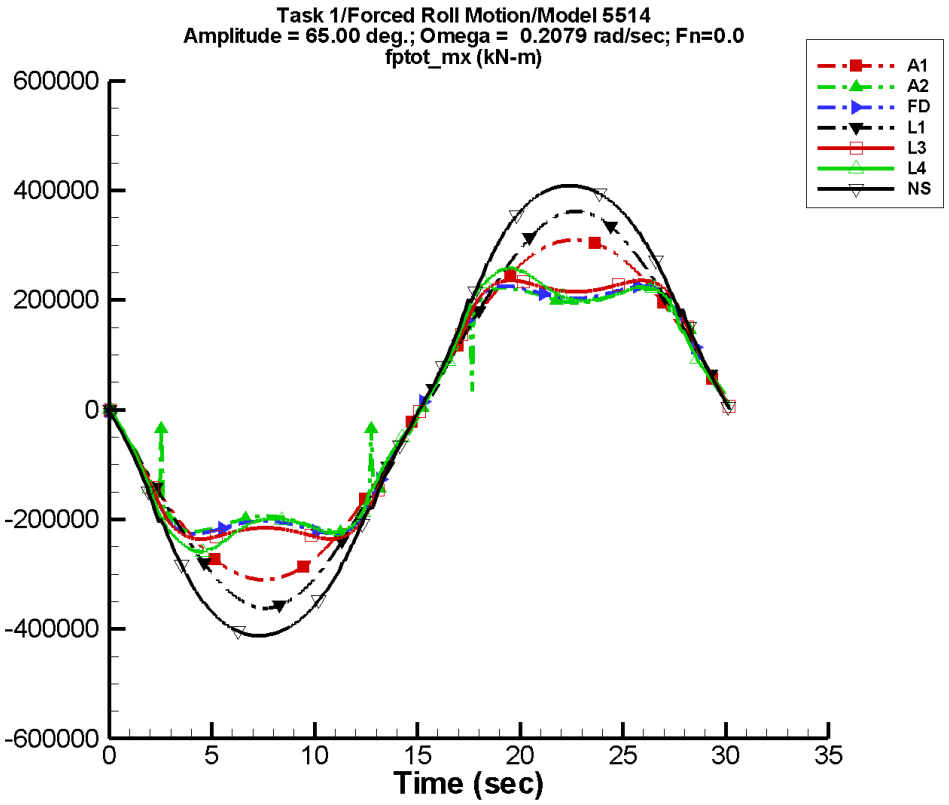
Figure D–124. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–247. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.20 | 2.15E+05 | 180 | 1.76 | 17 |
| A2 | -650. | 2.31E+05 | 179 | 1.46E+03 | 120 |
| FD | 34.7 | 2.34E+05 | -180 | 555. | 155 |
| L1 | 284. | 2.27E+05 | 179 | 1.12E+03 | 87 |
| L3 | 86.7 | 2.40E+05 | 179 | 180. | 66 |
| L4 | 444. | 2.40E+05 | -179 | 1.88E+03 | 145 |
| NF | — | — | — | — | — |
| NS | -12.5 | 2.69E+05 | -179 | 10.1 | 74 |

Table D–248. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.15E+05 | 2.15E+05 | -2.15E+05 | 2.15E+05 |
| A2 | -2.81E+05 | 2.22E+05 | -2.22E+05 | 2.24E+05 |
| FD | -2.23E+05 | 2.23E+05 | -2.23E+05 | 2.23E+05 |
| L1 | -2.31E+05 | 2.31E+05 | -2.31E+05 | 2.31E+05 |
| L3 | -2.30E+05 | 2.30E+05 | -2.30E+05 | 2.30E+05 |
| L4 | -2.36E+05 | 2.35E+05 | -2.35E+05 | 2.35E+05 |
| NF | — | — | — | — |
| NS | -2.81E+05 | 2.81E+05 | -2.80E+05 | 2.80E+05 |




Data identically zero, insufficient, or not available from NFA.

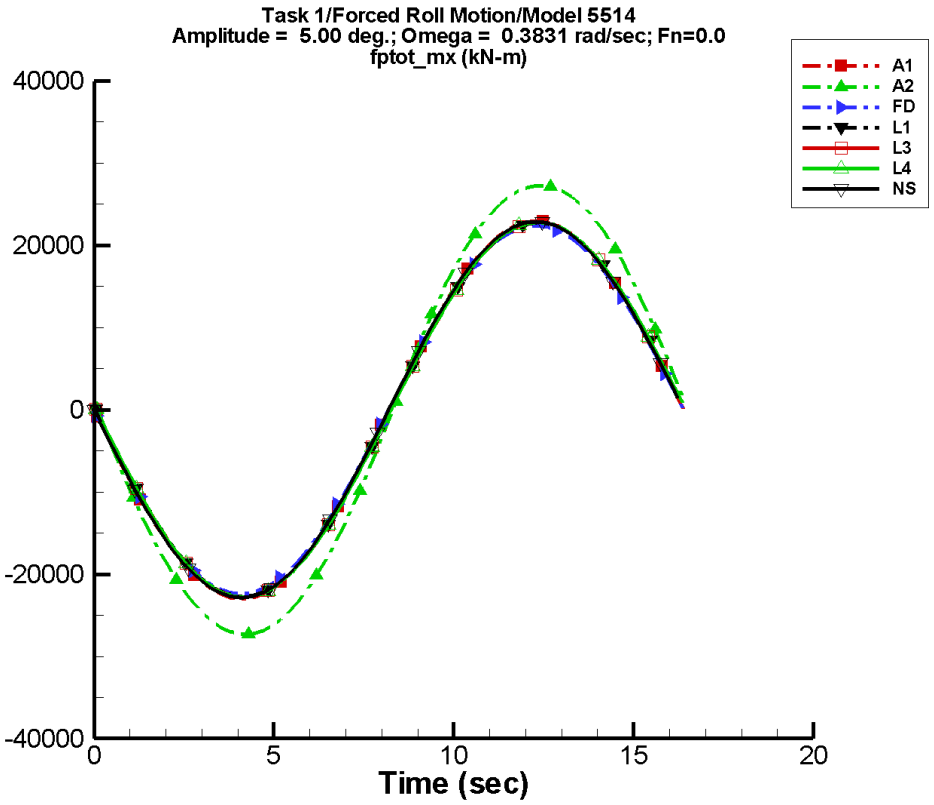
Figure D–125. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–249. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.62 | 3.10E+05 | 180 | 2.60 | 16 |
| A2 | -727. | 2.47E+05 | 180 | 7.77E+03 | -135 |
| FD | -1.13E+03 | 2.54E+05 | -179 | 6.68E+03 | -129 |
| L1 | 824. | 3.49E+05 | 179 | 3.24E+03 | 87 |
| L3 | -2.64E+03 | 2.66E+05 | 179 | 1.06E+04 | -92 |
| L4 | -2.41E+03 | 2.62E+05 | -177 | 1.03E+04 | -102 |
| NF | — | — | — | — | — |
| NS | -851. | 4.10E+05 | -179 | 951. | 93 |

Table D–250. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.10E+05 | 3.10E+05 | -3.10E+05 | 3.10E+05 |
| A2 | -2.24E+05 | 2.24E+05 | -2.22E+05 | 2.23E+05 |
| FD | -2.26E+05 | 2.26E+05 | -2.25E+05 | 2.25E+05 |
| L1 | -3.62E+05 | 3.62E+05 | -3.62E+05 | 3.62E+05 |
| L3 | -2.36E+05 | 2.36E+05 | -2.36E+05 | 2.36E+05 |
| L4 | -2.60E+05 | 2.59E+05 | -2.59E+05 | 2.58E+05 |
| NF | — | — | — | — |
| NS | -4.12E+05 | 4.09E+05 | -4.12E+05 | 4.09E+05 |




Data identically zero, insufficient, or not available from NFA.

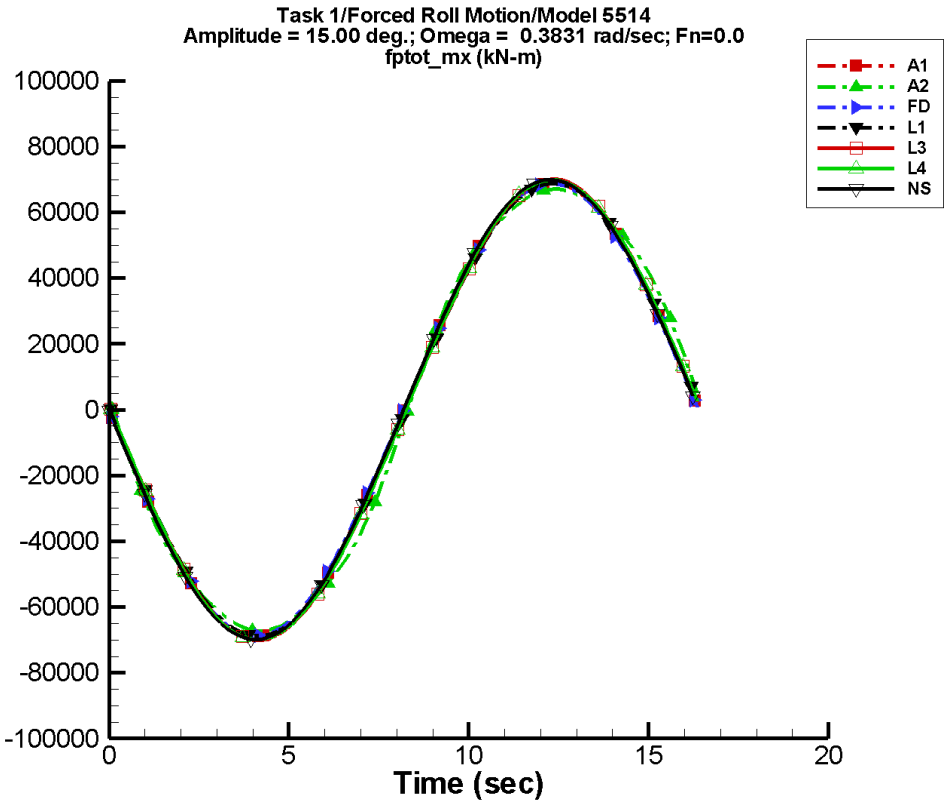
Figure D–126. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–251. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.74 | 2.30E+04 | -180 | 3.57 | -2 |
| A2 | -12.9 | 2.76E+04 | 178 | 62.5 | -118 |
| FD | 0.296 | 2.24E+04 | -180 | 1.60 | 81 |
| L1 | 0.244 | 2.27E+04 | 179 | 0.789 | 21 |
| L3 | 1.53 | 2.28E+04 | 179 | 3.12 | 39 |
| L4 | 1.10 | 2.28E+04 | 179 | 6.26 | 2 |
| NF | — | — | — | — | — |
| NS | 2.32E-02 | 2.29E+04 | -180 | 0.109 | 161 |

Table D–252. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.30E+04 | 2.29E+04 | -2.31E+04 | 2.29E+04 |
| A2 | -2.73E+04 | 2.73E+04 | -2.73E+04 | 2.72E+04 |
| FD | -2.24E+04 | 2.24E+04 | -2.23E+04 | 2.23E+04 |
| L1 | -2.27E+04 | 2.27E+04 | -2.27E+04 | 2.27E+04 |
| L3 | -2.28E+04 | 2.28E+04 | -2.28E+04 | 2.28E+04 |
| L4 | -2.28E+04 | 2.28E+04 | -2.28E+04 | 2.28E+04 |
| NF | — | — | — | — |
| NS | -2.29E+04 | 2.29E+04 | -2.26E+04 | 2.26E+04 |




Data identically zero, insufficient, or not available from NFA.

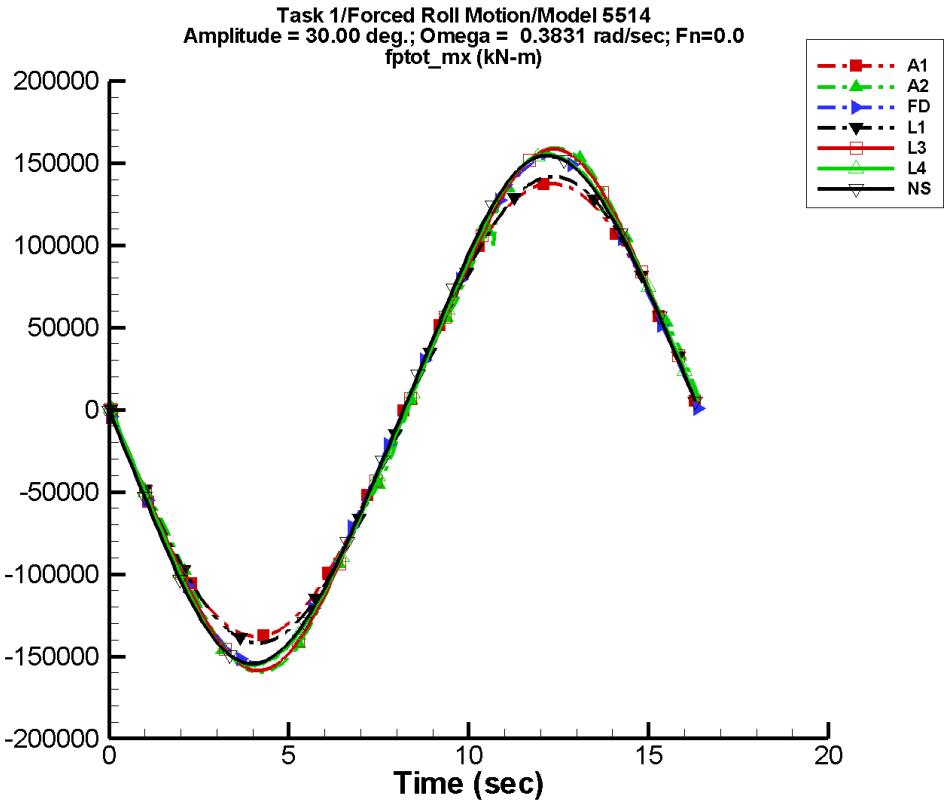
Figure D–127. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–253. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.22 | 6.89E+04 | -180 | 10.7 | -2 |
| A2 | -115. | 6.94E+04 | 178 | 597. | -117 |
| FD | 14.5 | 6.83E+04 | -180 | 96.9 | 76 |
| L1 | 9.87 | 6.86E+04 | 179 | 20.2 | 27 |
| L3 | 26.5 | 6.96E+04 | 179 | 51.7 | 30 |
| L4 | 21.4 | 6.96E+04 | 179 | 66.2 | 28 |
| NF | — | — | — | — | — |
| NS | 0.336 | 6.96E+04 | -180 | 0.181 | -153 |

Table D–254. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.90E+04 | 6.88E+04 | -6.92E+04 | 6.85E+04 |
| A2 | -6.73E+04 | 6.71E+04 | -6.73E+04 | 6.68E+04 |
| FD | -6.88E+04 | 6.88E+04 | -6.85E+04 | 6.85E+04 |
| L1 | -6.88E+04 | 6.88E+04 | -6.87E+04 | 6.87E+04 |
| L3 | -7.01E+04 | 7.01E+04 | -7.00E+04 | 7.00E+04 |
| L4 | -6.98E+04 | 6.99E+04 | -6.98E+04 | 6.98E+04 |
| NF | — | — | — | — |
| NS | -6.99E+04 | 6.99E+04 | -6.92E+04 | 6.92E+04 |




Data identically zero, insufficient, or not available from NFA.

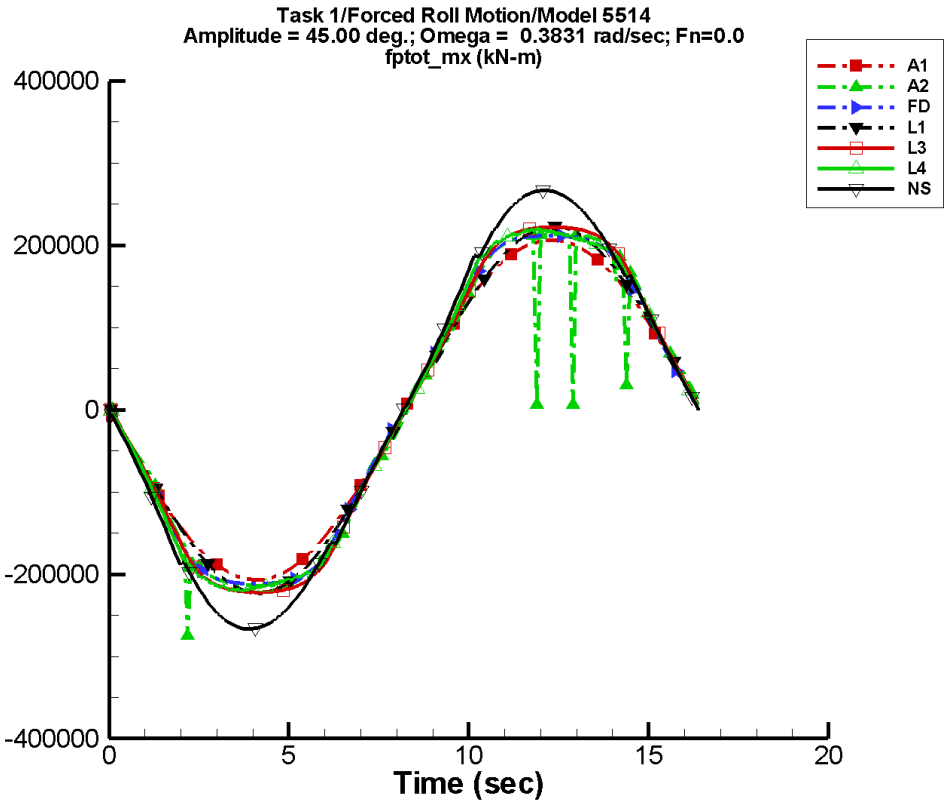
Figure D–128. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–255. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -10.4 | 1.38E+05 | -180 | 21.4 | -2 |
| A2 | -52.1 | 1.52E+05 | 177 | 907. | 54 |
| FD | 158. | 1.49E+05 | -180 | 1.08E+03 | 76 |
| L1 | 82.1 | 1.40E+05 | 179 | 159. | 28 |
| L3 | 352. | 1.52E+05 | 179 | 675. | 26 |
| L4 | 303. | 1.51E+05 | 179 | 635. | 37 |
| NF | — | — | — | — | — |
| NS | 3.32 | 1.51E+05 | -179 | 3.03 | -58 |

Table D–256. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.38E+05 | 1.38E+05 | -1.38E+05 | 1.37E+05 |
| A2 | -1.59E+05 | 1.59E+05 | -1.60E+05 | 1.58E+05 |
| FD | -1.54E+05 | 1.54E+05 | -1.53E+05 | 1.53E+05 |
| L1 | -1.42E+05 | 1.42E+05 | -1.42E+05 | 1.42E+05 |
| L3 | -1.59E+05 | 1.59E+05 | -1.58E+05 | 1.58E+05 |
| L4 | -1.56E+05 | 1.56E+05 | -1.55E+05 | 1.55E+05 |
| NF | — | — | — | — |
| NS | -1.55E+05 | 1.55E+05 | -1.54E+05 | 1.54E+05 |




Data identically zero, insufficient, or not available from NFA.

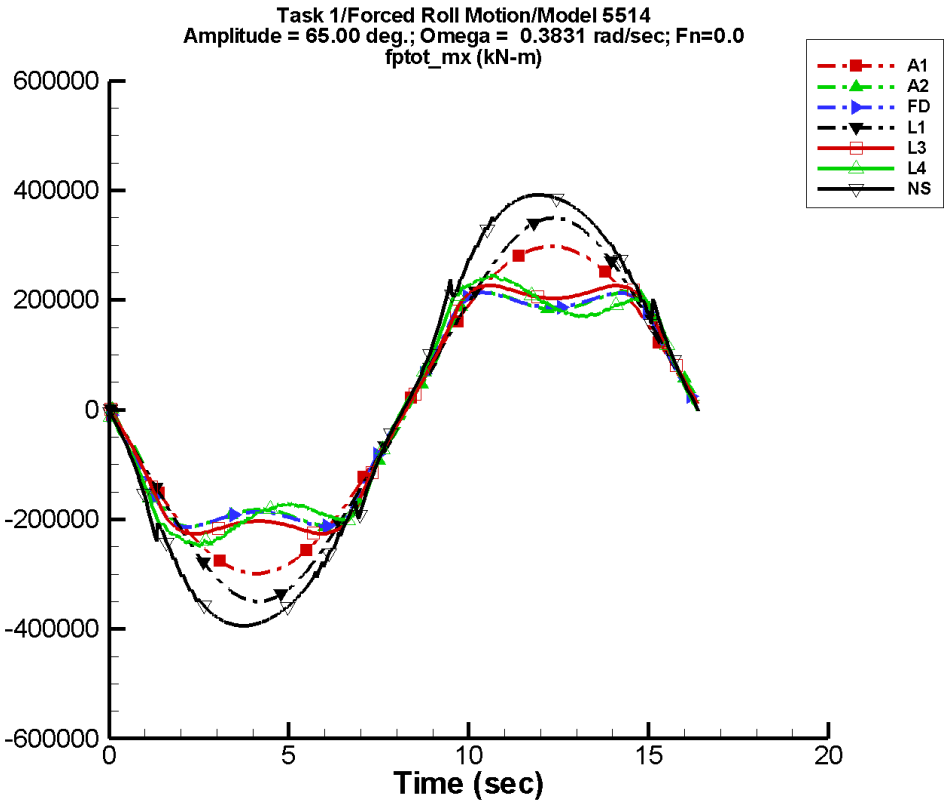
Figure D–129. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–257. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -15.6 | 2.07E+05 | -180 | 32.2 | -2 |
| A2 | -3.91E+03 | 2.19E+05 | 178 | 4.54E+03 | 81 |
| FD | -125. | 2.22E+05 | -180 | 461. | -68 |
| L1 | 276. | 2.18E+05 | 179 | 527. | 28 |
| L3 | 185. | 2.31E+05 | 179 | 510. | 74 |
| L4 | -251. | 2.29E+05 | -180 | 955. | 114 |
| NF | — | — | — | — | — |
| NS | 11.3 | 2.58E+05 | -179 | 11.1 | -51 |

Table D–258. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.07E+05 | 2.06E+05 | -2.08E+05 | 2.06E+05 |
| A2 | -2.74E+05 | 2.13E+05 | -2.15E+05 | 2.05E+05 |
| FD | -2.12E+05 | 2.12E+05 | -2.11E+05 | 2.11E+05 |
| L1 | -2.23E+05 | 2.23E+05 | -2.23E+05 | 2.23E+05 |
| L3 | -2.22E+05 | 2.22E+05 | -2.22E+05 | 2.22E+05 |
| L4 | -2.21E+05 | 2.20E+05 | -2.19E+05 | 2.19E+05 |
| NF | — | — | — | — |
| NS | -2.67E+05 | 2.67E+05 | -2.66E+05 | 2.66E+05 |




Data identically zero, insufficient, or not available from NFA.

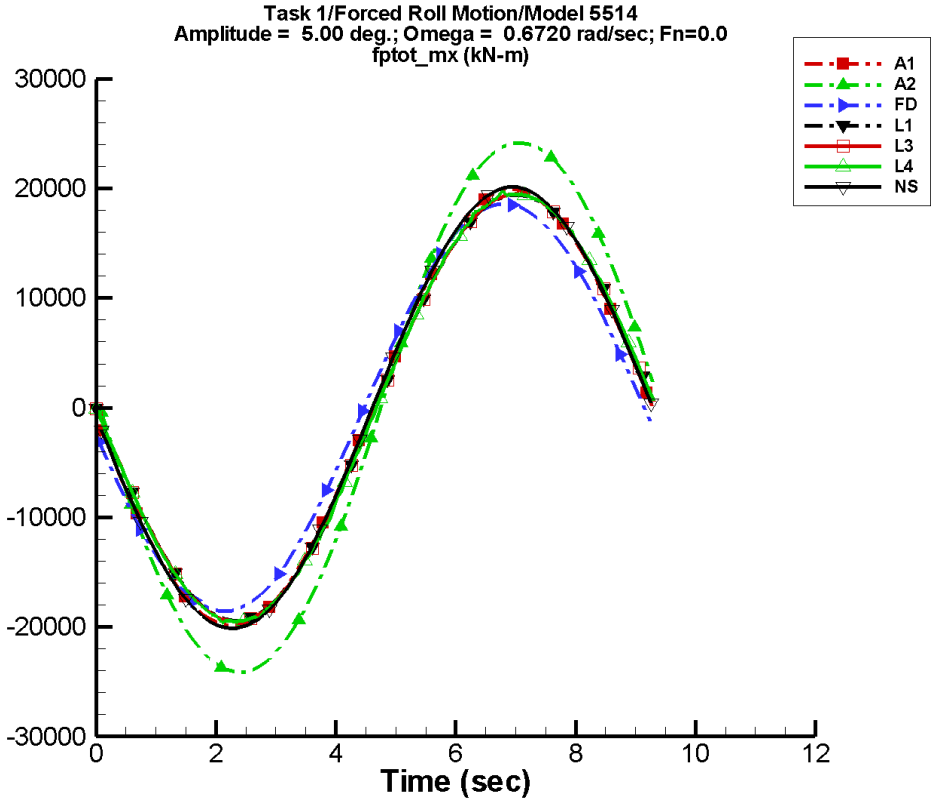
Figure D–130. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–259. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -22.6 | 2.99E+05 | -180 | 46.5 | -2 |
| A2 | -762. | 2.36E+05 | 179 | 7.92E+03 | -129 |
| FD | -1.28E+03 | 2.37E+05 | -179 | 9.34E+03 | -104 |
| L1 | 801. | 3.36E+05 | 179 | 1.53E+03 | 29 |
| L3 | -2.44E+03 | 2.57E+05 | 180 | 4.88E+03 | -165 |
| L4 | -3.52E+03 | 2.50E+05 | -176 | 6.16E+03 | -171 |
| NF | — | — | — | — | — |
| NS | -604. | 3.95E+05 | -178 | 557. | 100 |

Table D–260. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.99E+05 | 2.98E+05 | -3.00E+05 | 2.97E+05 |
| A2 | -2.14E+05 | 2.15E+05 | -2.12E+05 | 2.13E+05 |
| FD | -2.14E+05 | 2.14E+05 | -2.12E+05 | 2.12E+05 |
| L1 | -3.50E+05 | 3.50E+05 | -3.49E+05 | 3.49E+05 |
| L3 | -2.27E+05 | 2.27E+05 | -2.26E+05 | 2.26E+05 |
| L4 | -2.48E+05 | 2.45E+05 | -2.45E+05 | 2.42E+05 |
| NF | — | — | — | — |
| NS | -3.94E+05 | 3.92E+05 | -3.94E+05 | 3.92E+05 |




Data identically zero, insufficient, or not available from NFA.

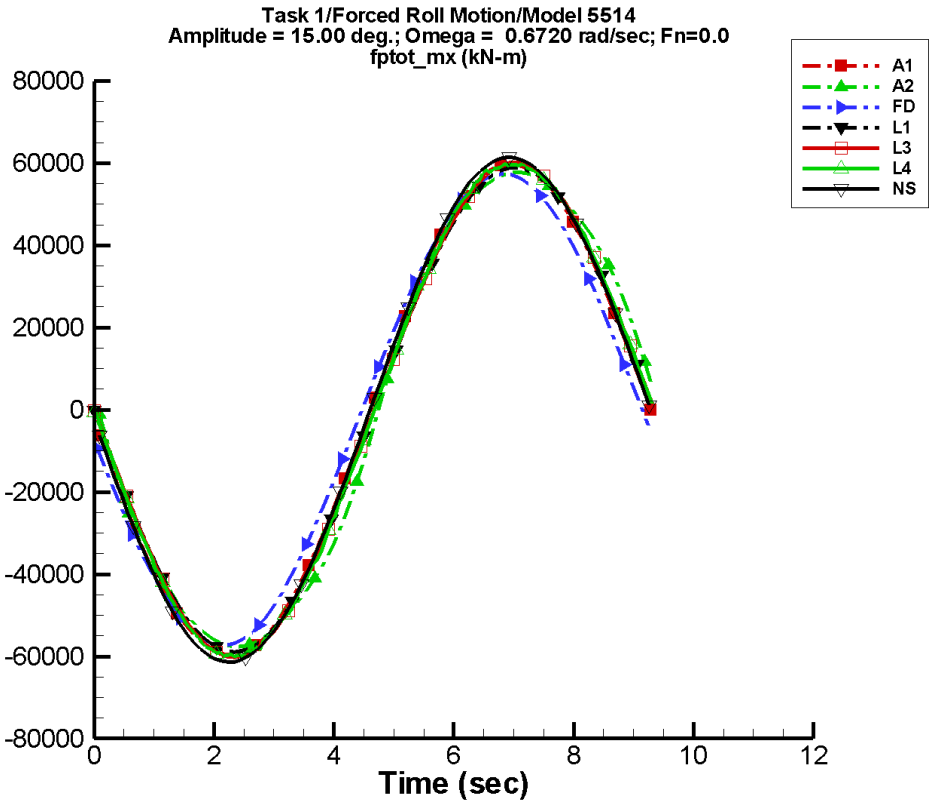
Figure D–131. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–261. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.31 | 1.99E+04 | -178 | 10.4 | -90 |
| A2 | -23.0 | 2.45E+04 | 178 | 54.3 | -131 |
| FD | 0.678 | 1.86E+04 | -172 | 1.14 | 149 |
| L1 | -2.45E-02 | 1.94E+04 | -180 | 0.679 | 15 |
| L3 | 1.17 | 1.95E+04 | -180 | 2.96 | 41 |
| L4 | -8.73 | 1.96E+04 | 180 | 35.0 | -41 |
| NF | — | — | — | — | — |
| NS | -0.847 | 2.01E+04 | -178 | 1.07 | 175 |

Table D–262. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.99E+04 | 1.99E+04 | -1.97E+04 | 1.97E+04 |
| A2 | -2.41E+04 | 2.42E+04 | -2.39E+04 | 2.39E+04 |
| FD | -1.86E+04 | 1.86E+04 | -1.84E+04 | 1.84E+04 |
| L1 | -1.94E+04 | 1.94E+04 | -1.93E+04 | 1.93E+04 |
| L3 | -1.95E+04 | 1.95E+04 | -1.94E+04 | 1.94E+04 |
| L4 | -1.96E+04 | 1.98E+04 | -1.94E+04 | 1.95E+04 |
| NF | — | — | — | — |
| NS | -2.01E+04 | 2.01E+04 | -1.99E+04 | 1.99E+04 |




Data identically zero, insufficient, or not available from NFA.

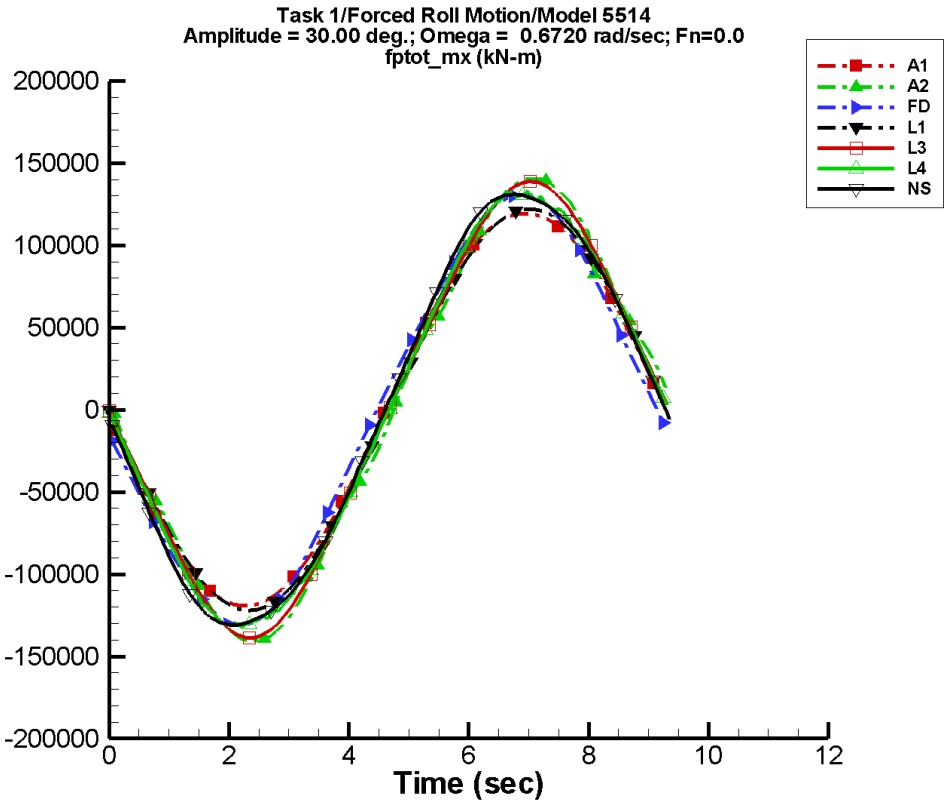
Figure D–132. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–263. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.91 | 5.97E+04 | -178 | 31.2 | -90 |
| A2 | -190. | 6.02E+04 | 178 | 485. | -131 |
| FD | 37.1 | 5.69E+04 | -172 | 68.6 | 148 |
| L1 | 9.53 | 5.87E+04 | -180 | 20.4 | 24 |
| L3 | 26.6 | 5.97E+04 | 180 | 52.4 | 27 |
| L4 | -94.8 | 6.00E+04 | -180 | 149. | -12 |
| NF | — | — | — | — | — |
| NS | -1.47 | 6.13E+04 | -177 | 3.09 | -173 |

Table D–264. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.96E+04 | 5.97E+04 | -5.90E+04 | 5.90E+04 |
| A2 | -5.77E+04 | 5.78E+04 | -5.71E+04 | 5.72E+04 |
| FD | -5.73E+04 | 5.73E+04 | -5.67E+04 | 5.66E+04 |
| L1 | -5.89E+04 | 5.89E+04 | -5.87E+04 | 5.86E+04 |
| L3 | -6.02E+04 | 6.02E+04 | -5.99E+04 | 5.99E+04 |
| L4 | -6.01E+04 | 5.98E+04 | -5.97E+04 | 5.95E+04 |
| NF | — | — | — | — |
| NS | -6.14E+04 | 6.14E+04 | -6.08E+04 | 6.08E+04 |




Data identically zero, insufficient, or not available from NFA.

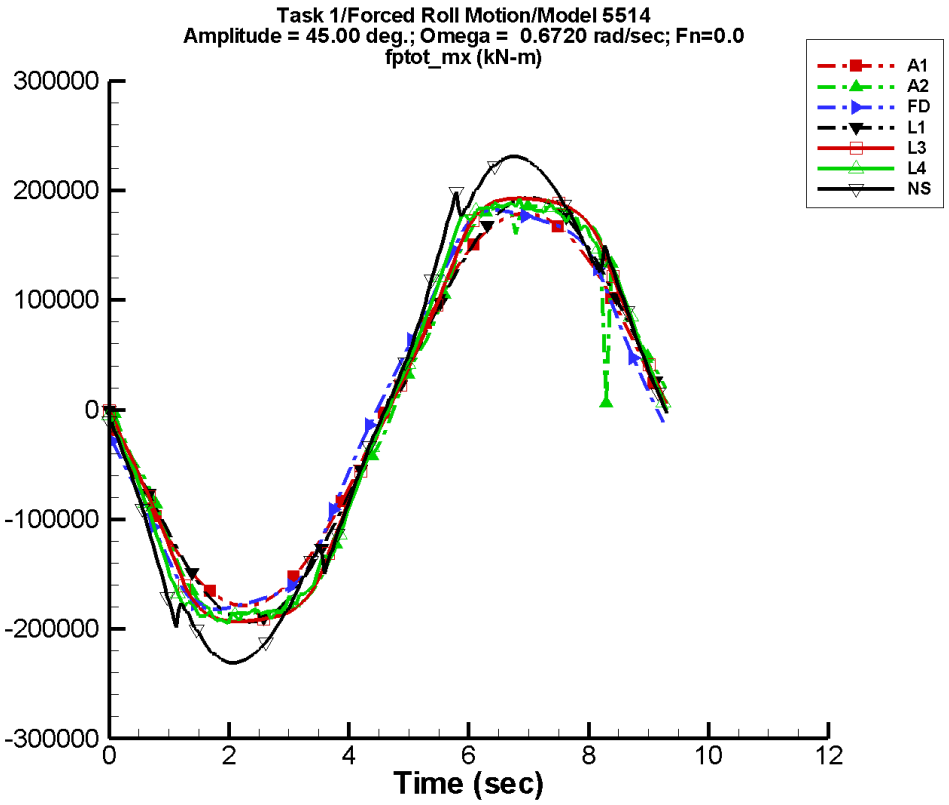
Figure D–133. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–265. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -13.8 | 1.19E+05 | -178 | 62.4 | -90 |
| A2 | 62.8 | 1.33E+05 | 177 | 1.13E+03 | 7 |
| FD | 406. | 1.26E+05 | -173 | 766. | 146 |
| L1 | 83.2 | 1.21E+05 | 180 | 163. | 25 |
| L3 | 362. | 1.32E+05 | 180 | 695. | 22 |
| L4 | -116. | 1.29E+05 | -179 | 407. | 23 |
| NF | — | — | — | — | — |
| NS | 8.34 | 1.31E+05 | -177 | 14.6 | -110 |

Table D–266. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.19E+05 | 1.19E+05 | -1.18E+05 | 1.18E+05 |
| A2 | -1.40E+05 | 1.40E+05 | -1.39E+05 | 1.39E+05 |
| FD | -1.31E+05 | 1.31E+05 | -1.29E+05 | 1.29E+05 |
| L1 | -1.22E+05 | 1.22E+05 | -1.22E+05 | 1.21E+05 |
| L3 | -1.39E+05 | 1.39E+05 | -1.38E+05 | 1.38E+05 |
| L4 | -1.32E+05 | 1.33E+05 | -1.31E+05 | 1.31E+05 |
| NF | — | — | — | — |
| NS | -1.31E+05 | 1.31E+05 | -1.30E+05 | 1.30E+05 |




Data identically zero, insufficient, or not available from NFA.

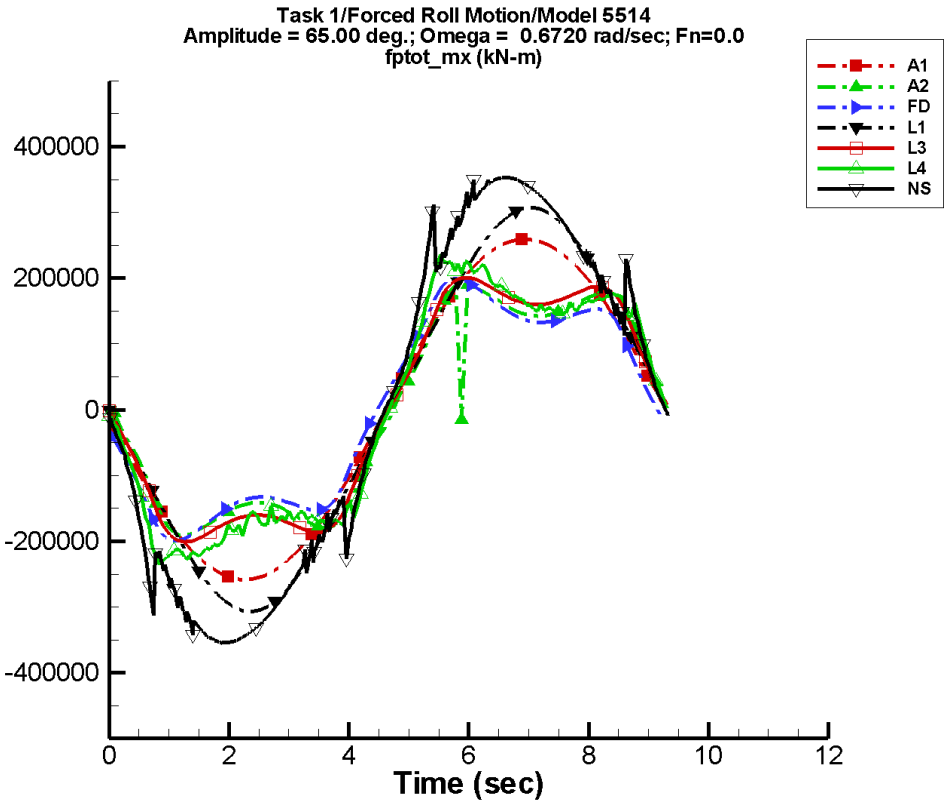
Figure D–134. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–267. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -20.7 | 1.79E+05 | -178 | 93.6 | -90 |
| A2 | -2.07E+03 | 1.95E+05 | 178 | 2.30E+03 | 26 |
| FD | -229. | 1.87E+05 | -173 | 651. | 33 |
| L1 | 280. | 1.88E+05 | 180 | 539. | 25 |
| L3 | -42.7 | 2.02E+05 | 180 | 837. | 110 |
| L4 | -1.70E+03 | 2.03E+05 | -178 | 1.76E+03 | 149 |
| NF | — | — | — | — | — |
| NS | 41.2 | 2.25E+05 | -175 | 39.9 | -113 |

Table D–268. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.79E+05 | 1.79E+05 | -1.77E+05 | 1.77E+05 |
| A2 | -1.86E+05 | 1.86E+05 | -1.86E+05 | 1.85E+05 |
| FD | -1.82E+05 | 1.82E+05 | -1.81E+05 | 1.81E+05 |
| L1 | -1.93E+05 | 1.93E+05 | -1.92E+05 | 1.92E+05 |
| L3 | -1.93E+05 | 1.93E+05 | -1.93E+05 | 1.93E+05 |
| L4 | -1.95E+05 | 1.92E+05 | -1.91E+05 | 1.87E+05 |
| NF | — | — | — | — |
| NS | -2.31E+05 | 2.31E+05 | -2.31E+05 | 2.31E+05 |




Data identically zero, insufficient, or not available from NFA.

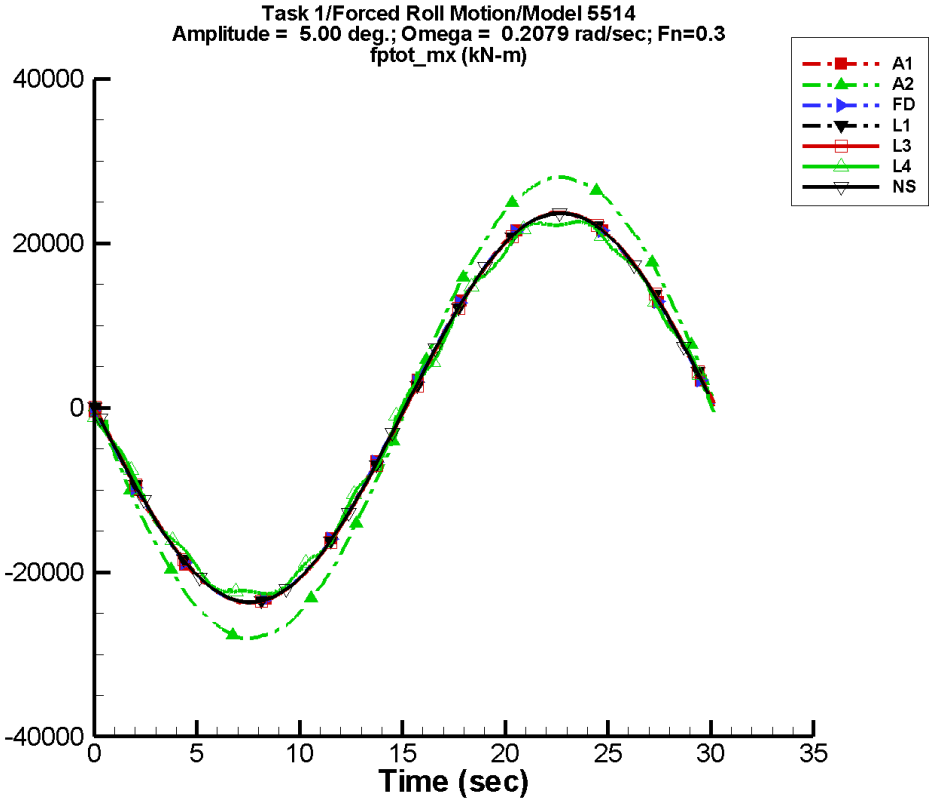
Figure D–135. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–269. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -29.9 | 2.59E+05 | -178 | 135. | -90 |
| A2 | -4.51E+03 | 1.96E+05 | 179 | 9.70E+03 | -169 |
| FD | -3.44E+03 | 1.87E+05 | -168 | 6.55E+03 | -29 |
| L1 | 815. | 2.93E+05 | 179 | 1.56E+03 | 25 |
| L3 | -2.66E+03 | 2.15E+05 | -178 | 5.29E+03 | -171 |
| L4 | -6.12E+03 | 2.27E+05 | -174 | 7.66E+03 | 178 |
| NF | — | — | — | — | — |
| NS | -311. | 3.51E+05 | -174 | 353. | 158 |

Table D–270. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.58E+05 | 2.59E+05 | -2.55E+05 | 2.56E+05 |
| A2 | -1.91E+05 | 1.91E+05 | -1.84E+05 | 1.73E+05 |
| FD | -2.00E+05 | 2.00E+05 | -1.91E+05 | 1.91E+05 |
| L1 | -3.07E+05 | 3.07E+05 | -3.05E+05 | 3.05E+05 |
| L3 | -2.01E+05 | 2.01E+05 | -1.99E+05 | 1.99E+05 |
| L4 | -2.36E+05 | 2.36E+05 | -2.23E+05 | 2.22E+05 |
| NF | — | — | — | — |
| NS | -3.55E+05 | 3.53E+05 | -3.55E+05 | 3.53E+05 |




Data identically zero, insufficient, or not available from NFA.

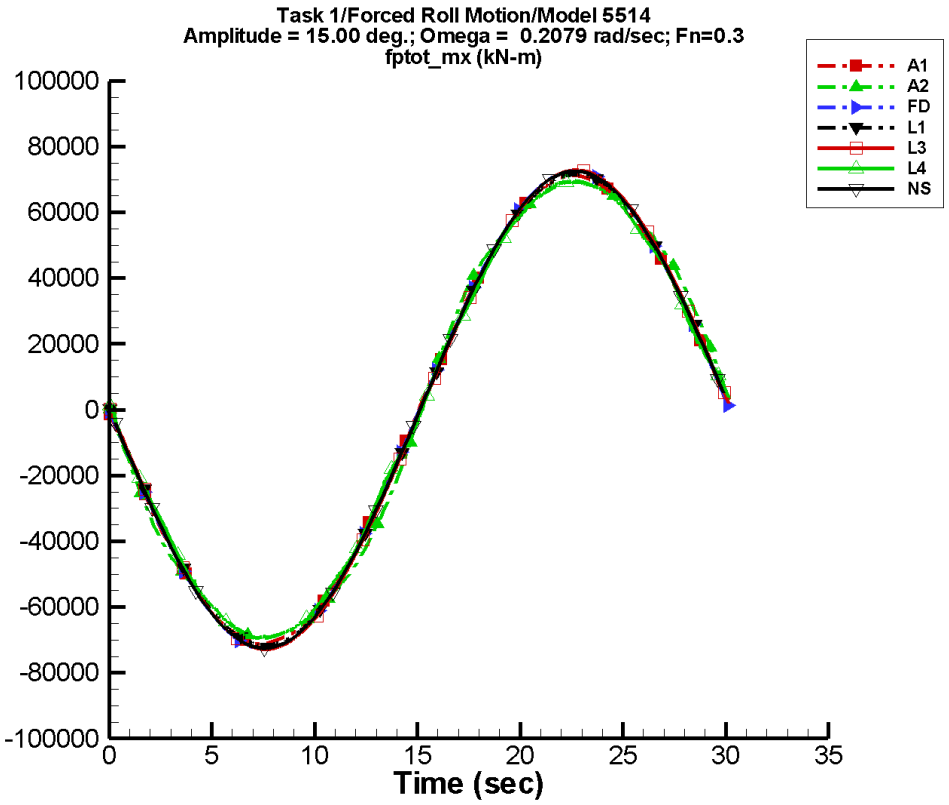
Figure D–136. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–271. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.276 | 2.37E+04 | -180 | 0.926 | -17 |
| A2 | -12.5 | 2.83E+04 | 179 | 61.8 | -118 |
| FD | 0.255 | 2.37E+04 | -180 | 1.14 | 54 |
| L1 | 0.600 | 2.36E+04 | 179 | 1.58 | 87 |
| L3 | 1.78 | 2.37E+04 | 179 | 6.12 | 86 |
| L4 | 12.1 | 2.28E+04 | 180 | 31.6 | 45 |
| NF | — | — | — | — | — |
| NS | -1.12E-02 | 2.37E+04 | 180 | 9.16E-03 | 12 |

Table D–272. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.38E+04 | 2.38E+04 | -2.38E+04 | 2.37E+04 |
| A2 | -2.81E+04 | 2.81E+04 | -2.81E+04 | 2.80E+04 |
| FD | -2.37E+04 | 2.37E+04 | -2.36E+04 | 2.36E+04 |
| L1 | -2.36E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| L3 | -2.37E+04 | 2.37E+04 | -2.37E+04 | 2.37E+04 |
| L4 | -2.28E+04 | 2.27E+04 | -2.26E+04 | 2.26E+04 |
| NF | — | — | — | — |
| NS | -2.37E+04 | 2.37E+04 | -2.34E+04 | 2.34E+04 |




Data identically zero, insufficient, or not available from NFA.

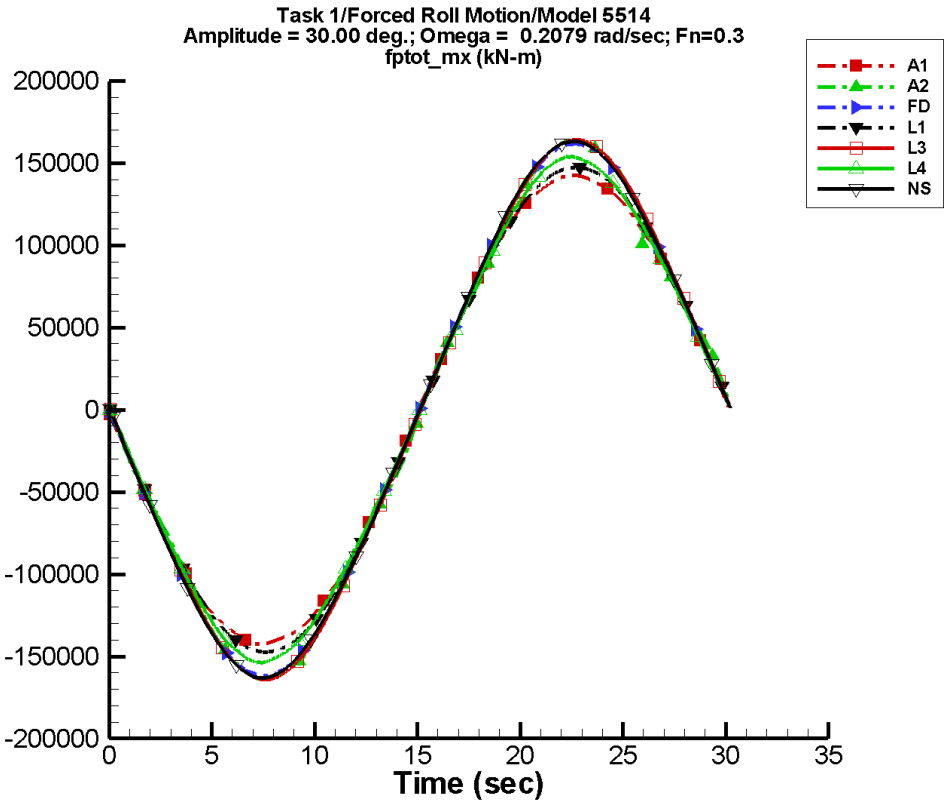
Figure D–137. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–273. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.833 | 7.11E+04 | -180 | 2.78 | -16 |
| A2 | -118. | 7.16E+04 | 179 | 587. | -116 |
| FD | 13.9 | 7.21E+04 | 180 | 70.6 | 56 |
| L1 | 11.0 | 7.14E+04 | 179 | 42.9 | 87 |
| L3 | 28.3 | 7.24E+04 | 179 | 110. | 87 |
| L4 | 50.9 | 6.93E+04 | 180 | 106. | 85 |
| NF | — | — | — | — | — |
| NS | -0.265 | 7.21E+04 | 180 | 0.225 | 58 |

Table D–274. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.13E+04 | 7.13E+04 | -7.13E+04 | 7.12E+04 |
| A2 | -6.95E+04 | 6.96E+04 | -6.95E+04 | 6.95E+04 |
| FD | -7.27E+04 | 7.27E+04 | -7.26E+04 | 7.26E+04 |
| L1 | -7.15E+04 | 7.15E+04 | -7.15E+04 | 7.15E+04 |
| L3 | -7.28E+04 | 7.28E+04 | -7.28E+04 | 7.28E+04 |
| L4 | -6.93E+04 | 6.93E+04 | -6.93E+04 | 6.92E+04 |
| NF | — | — | — | — |
| NS | -7.25E+04 | 7.25E+04 | -7.18E+04 | 7.18E+04 |




Data identically zero, insufficient, or not available from NFA.

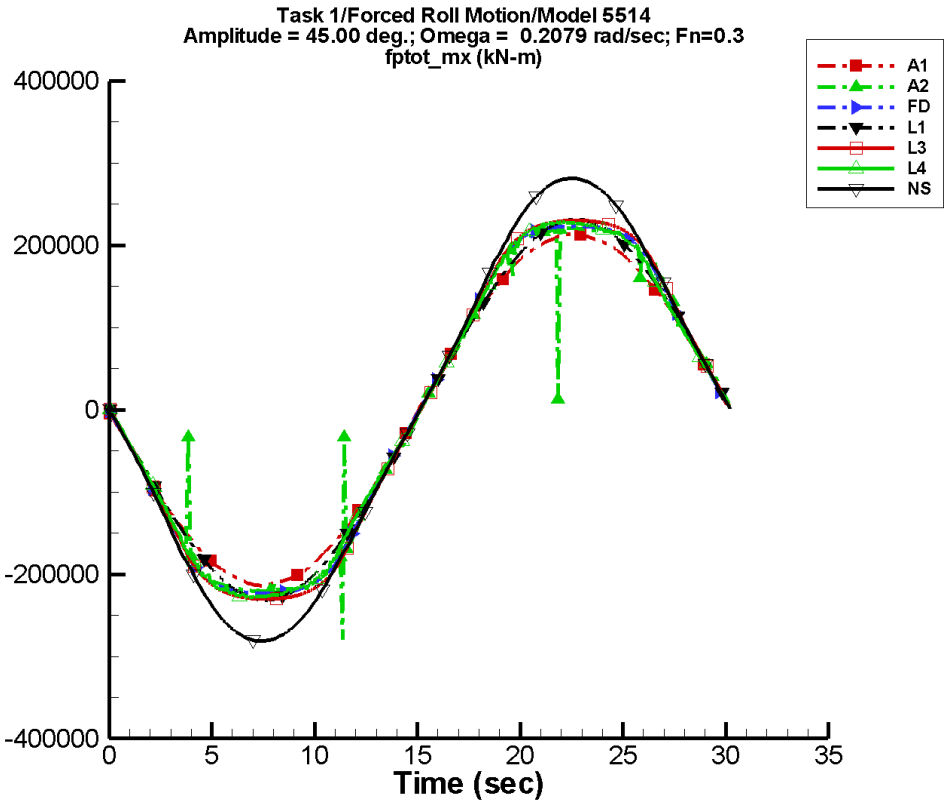
Figure D–138. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–275. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.67 | 1.42E+05 | -180 | 5.56 | -16 |
| A2 | 24.1 | 1.57E+05 | 179 | 1.03E+03 | 41 |
| FD | 156. | 1.56E+05 | 180 | 798. | 57 |
| L1 | 86.1 | 1.46E+05 | 179 | 339. | 87 |
| L3 | 365. | 1.58E+05 | 179 | 1.44E+03 | 87 |
| L4 | 470. | 1.48E+05 | -180 | 1.26E+03 | 92 |
| NF | — | — | — | — | — |
| NS | -3.10 | 1.57E+05 | 180 | 2.85 | 67 |

Table D–276. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.43E+05 | 1.43E+05 | -1.43E+05 | 1.42E+05 |
| A2 | -1.64E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| FD | -1.62E+05 | 1.62E+05 | -1.61E+05 | 1.61E+05 |
| L1 | -1.47E+05 | 1.47E+05 | -1.47E+05 | 1.47E+05 |
| L3 | -1.64E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| L4 | -1.54E+05 | 1.54E+05 | -1.54E+05 | 1.54E+05 |
| NF | — | — | — | — |
| NS | -1.63E+05 | 1.63E+05 | -1.62E+05 | 1.62E+05 |




Data identically zero, insufficient, or not available from NFA.

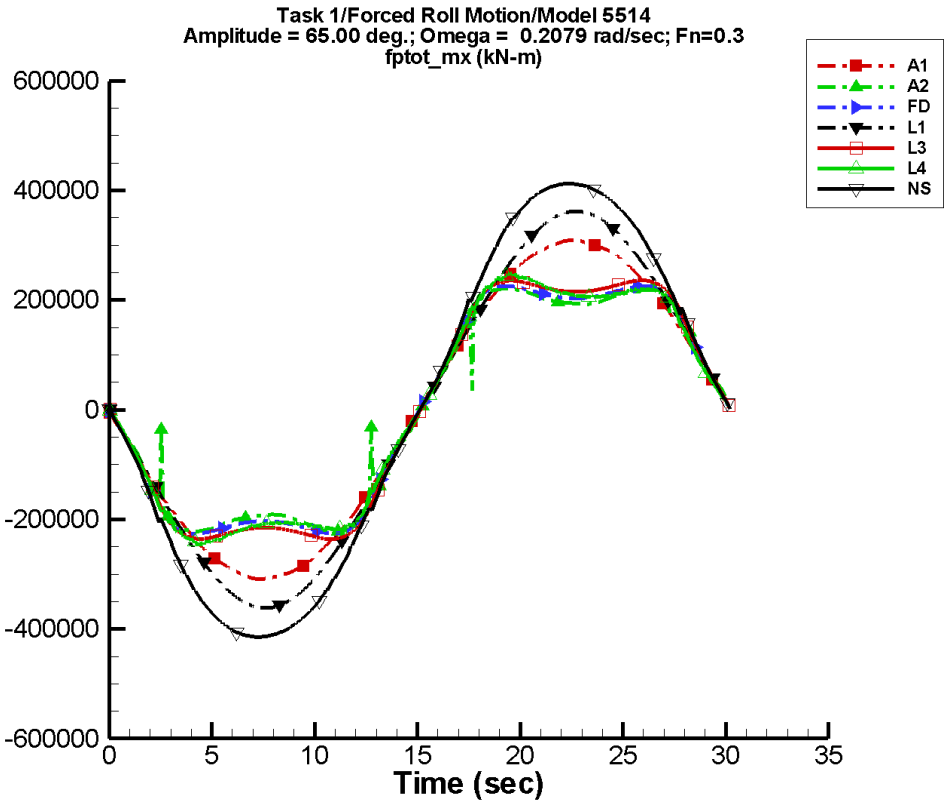
Figure D–139. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–277. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.48 | 2.13E+05 | -180 | 8.33 | -17 |
| A2 | -649. | 2.29E+05 | 179 | 1.45E+03 | 119 |
| FD | 34.7 | 2.34E+05 | -180 | 555. | 155 |
| L1 | 284. | 2.27E+05 | 179 | 1.12E+03 | 87 |
| L3 | 86.8 | 2.39E+05 | 179 | 180. | 66 |
| L4 | 660. | 2.32E+05 | -180 | 1.30E+03 | 103 |
| NF | — | — | — | — | — |
| NS | -11.9 | 2.69E+05 | -180 | 9.87 | 62 |

Table D–278. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.14E+05 | 2.14E+05 | -2.14E+05 | 2.14E+05 |
| A2 | -2.79E+05 | 2.21E+05 | -2.21E+05 | 2.23E+05 |
| FD | -2.23E+05 | 2.23E+05 | -2.23E+05 | 2.23E+05 |
| L1 | -2.31E+05 | 2.31E+05 | -2.31E+05 | 2.31E+05 |
| L3 | -2.30E+05 | 2.30E+05 | -2.30E+05 | 2.30E+05 |
| L4 | -2.28E+05 | 2.28E+05 | -2.28E+05 | 2.28E+05 |
| NF | — | — | — | — |
| NS | -2.82E+05 | 2.81E+05 | -2.81E+05 | 2.81E+05 |




Data identically zero, insufficient, or not available from NFA.

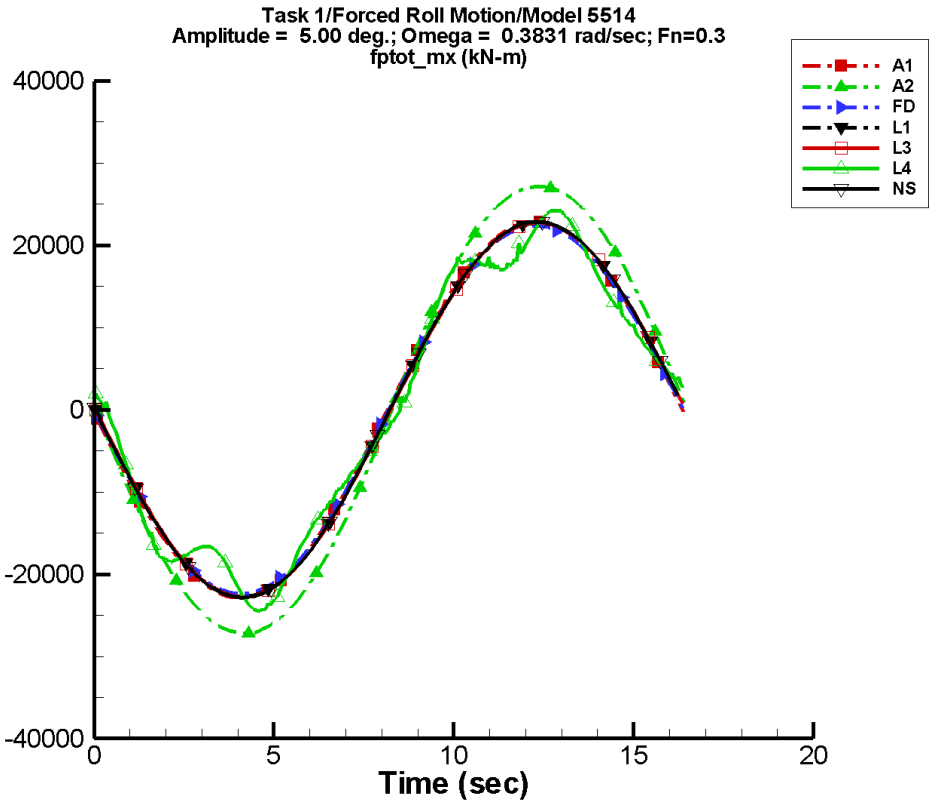
Figure D–140. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–279. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.66 | 3.08E+05 | -180 | 12.0 | -16 |
| A2 | -726. | 2.45E+05 | -180 | 7.76E+03 | -135 |
| FD | -1.13E+03 | 2.54E+05 | -179 | 6.68E+03 | -129 |
| L1 | 824. | 3.49E+05 | 179 | 3.24E+03 | 87 |
| L3 | -2.64E+03 | 2.66E+05 | 179 | 1.06E+04 | -92 |
| L4 | -1.70E+03 | 2.59E+05 | -179 | 9.38E+03 | -98 |
| NF | — | — | — | — | — |
| NS | -662. | 4.12E+05 | -179 | 674. | 90 |

Table D–280. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.09E+05 | 3.09E+05 | -3.09E+05 | 3.09E+05 |
| A2 | -2.22E+05 | 2.22E+05 | -2.21E+05 | 2.21E+05 |
| FD | -2.26E+05 | 2.26E+05 | -2.25E+05 | 2.25E+05 |
| L1 | -3.62E+05 | 3.62E+05 | -3.62E+05 | 3.62E+05 |
| L3 | -2.36E+05 | 2.36E+05 | -2.36E+05 | 2.36E+05 |
| L4 | -2.48E+05 | 2.48E+05 | -2.44E+05 | 2.46E+05 |
| NF | — | — | — | — |
| NS | -4.15E+05 | 4.12E+05 | -4.14E+05 | 4.12E+05 |




Data identically zero, insufficient, or not available from NFA.

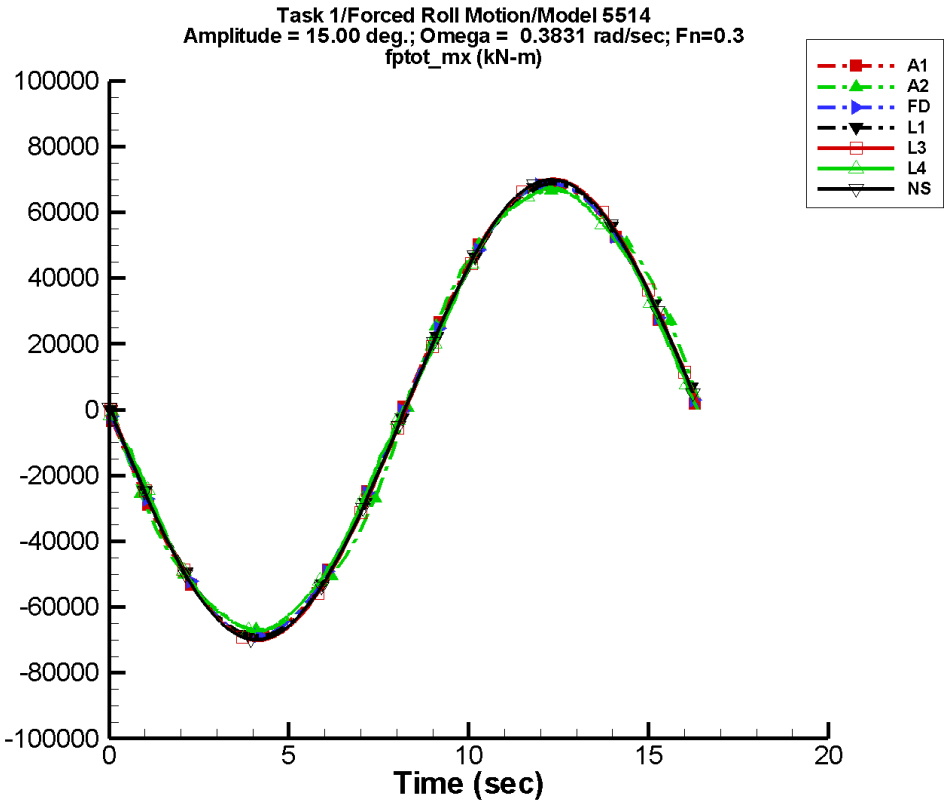
Figure D–141. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–281. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.12 | 2.29E+04 | -179 | 4.23 | 51 |
| A2 | -12.3 | 2.75E+04 | 179 | 59.9 | -120 |
| FD | 0.293 | 2.24E+04 | -180 | 1.60 | 81 |
| L1 | 0.429 | 2.27E+04 | 179 | 0.739 | 29 |
| L3 | 1.68 | 2.28E+04 | 179 | 3.11 | 42 |
| L4 | -11.2 | 2.20E+04 | 180 | 260. | 146 |
| NF | — | — | — | — | — |
| NS | 1.05E-02 | 2.29E+04 | 179 | 0.105 | -175 |

Table D–282. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.29E+04 | 2.28E+04 | -2.30E+04 | 2.28E+04 |
| A2 | -2.72E+04 | 2.71E+04 | -2.72E+04 | 2.71E+04 |
| FD | -2.24E+04 | 2.24E+04 | -2.23E+04 | 2.23E+04 |
| L1 | -2.27E+04 | 2.27E+04 | -2.27E+04 | 2.27E+04 |
| L3 | -2.28E+04 | 2.28E+04 | -2.28E+04 | 2.28E+04 |
| L4 | -2.45E+04 | 2.42E+04 | -2.43E+04 | 2.41E+04 |
| NF | — | — | — | — |
| NS | -2.29E+04 | 2.29E+04 | -2.26E+04 | 2.26E+04 |




Data identically zero, insufficient, or not available from NFA.

Figure D–142. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–283. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.38 | 6.86E+04 | -179 | 12.7 | 51 |
| A2 | -113. | 6.91E+04 | 179 | 589. | -118 |
| FD | 14.5 | 6.83E+04 | -180 | 96.9 | 76 |
| L1 | 10.1 | 6.86E+04 | 179 | 20.1 | 28 |
| L3 | 26.7 | 6.96E+04 | 179 | 51.7 | 31 |
| L4 | 147. | 6.68E+04 | -180 | 274. | 58 |
| NF | — | — | — | — | — |
| NS | 0.441 | 6.96E+04 | 180 | 0.380 | -124 |

Table D–284. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.86E+04 | 6.85E+04 | -6.89E+04 | 6.82E+04 |
| A2 | -6.69E+04 | 6.67E+04 | -6.70E+04 | 6.65E+04 |
| FD | -6.88E+04 | 6.88E+04 | -6.85E+04 | 6.85E+04 |
| L1 | -6.88E+04 | 6.88E+04 | -6.87E+04 | 6.87E+04 |
| L3 | -7.01E+04 | 7.01E+04 | -7.00E+04 | 7.00E+04 |
| L4 | -6.74E+04 | 6.76E+04 | -6.72E+04 | 6.72E+04 |
| NF | — | — | — | — |
| NS | -6.99E+04 | 6.99E+04 | -6.92E+04 | 6.92E+04 |

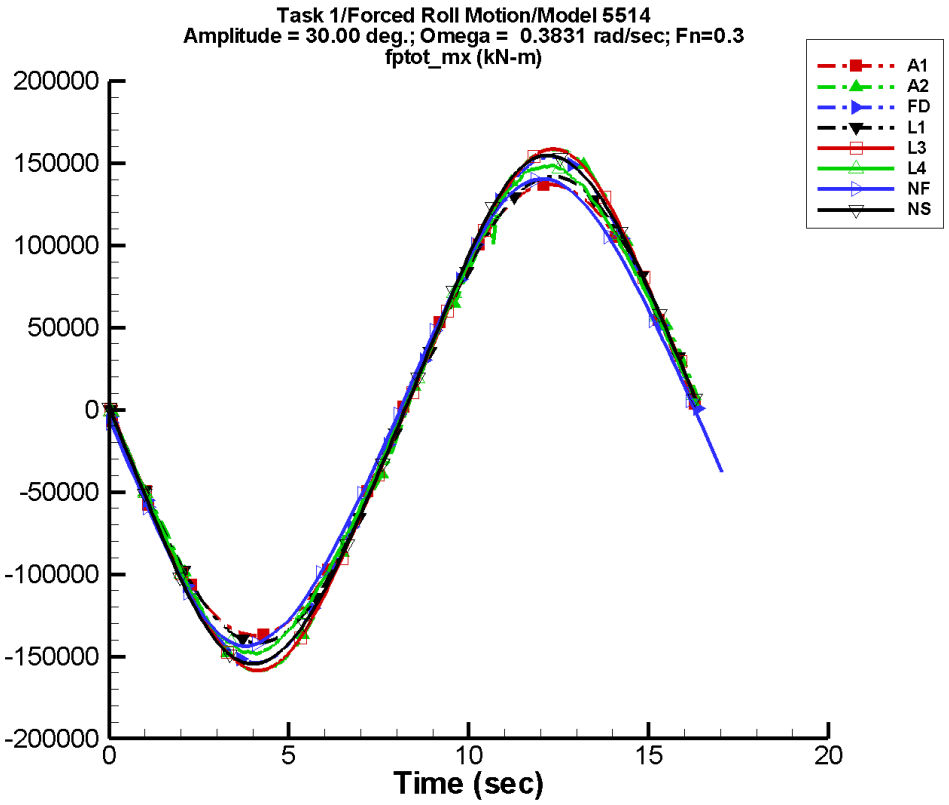



Figure D–143. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–285. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.75 | 1.37E+05 | -179 | 25.3 | 51 |
| A2 | -48.4 | 1.52E+05 | 178 | 921. | 55 |
| FD | 158. | 1.49E+05 | -180 | 1.08E+03 | 76 |
| L1 | 82.3 | 1.40E+05 | 179 | 159. | 28 |
| L3 | 352. | 1.52E+05 | 179 | 675. | 26 |
| L4 | 581. | 1.43E+05 | -180 | 773. | 36 |
| NF | -2.36E+03 | 1.36E+05 | -139 | 7.11E+03 | 63 |
| NS | 4.80 | 1.51E+05 | -180 | 4.33 | -73 |

Table D–286. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.37E+05 | 1.37E+05 | -1.38E+05 | 1.36E+05 |
| A2 | -1.59E+05 | 1.58E+05 | -1.59E+05 | 1.58E+05 |
| FD | -1.54E+05 | 1.54E+05 | -1.53E+05 | 1.53E+05 |
| L1 | -1.42E+05 | 1.42E+05 | -1.42E+05 | 1.42E+05 |
| L3 | -1.59E+05 | 1.59E+05 | -1.58E+05 | 1.58E+05 |
| L4 | -1.49E+05 | 1.48E+05 | -1.48E+05 | 1.48E+05 |
| NF | -1.44E+05 | 1.40E+05 | -1.43E+05 | 1.40E+05 |
| NS | -1.55E+05 | 1.55E+05 | -1.54E+05 | 1.54E+05 |

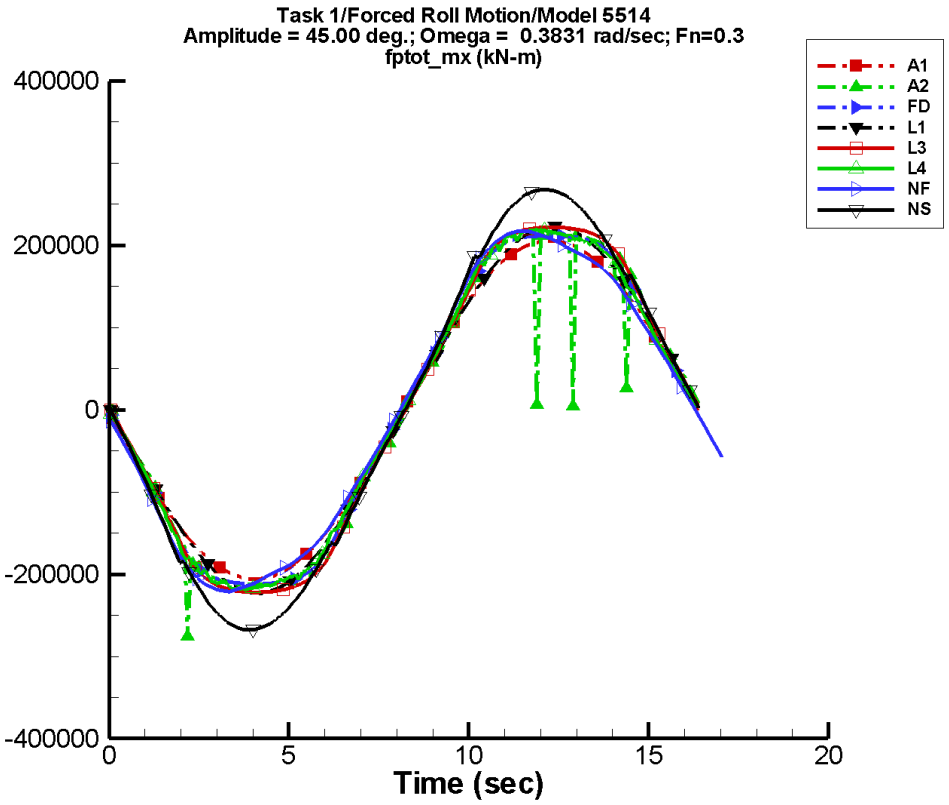



Figure D–144. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–287. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -10.1 | 2.06E+05 | -179 | 38.0 | 51 |
| A2 | -3.90E+03 | 2.18E+05 | 179 | 4.57E+03 | 81 |
| FD | -125. | 2.22E+05 | -180 | 461. | -68 |
| L1 | 276. | 2.18E+05 | 179 | 526. | 29 |
| L3 | 185. | 2.31E+05 | 179 | 511. | 74 |
| L4 | 395. | 2.23E+05 | -179 | 825. | 91 |
| NF | -3.47E+03 | 2.14E+05 | -138 | 1.04E+04 | 65 |
| NS | 21.7 | 2.58E+05 | -179 | 19.6 | -72 |

Table D–288. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.06E+05 | 2.05E+05 | -2.07E+05 | 2.05E+05 |
| A2 | -2.76E+05 | 2.12E+05 | -2.14E+05 | 2.06E+05 |
| FD | -2.12E+05 | 2.12E+05 | -2.11E+05 | 2.11E+05 |
| L1 | -2.23E+05 | 2.23E+05 | -2.23E+05 | 2.23E+05 |
| L3 | -2.22E+05 | 2.22E+05 | -2.22E+05 | 2.22E+05 |
| L4 | -2.20E+05 | 2.19E+05 | -2.18E+05 | 2.18E+05 |
| NF | -2.21E+05 | 2.18E+05 | -2.19E+05 | 2.15E+05 |
| NS | -2.68E+05 | 2.68E+05 | -2.67E+05 | 2.67E+05 |

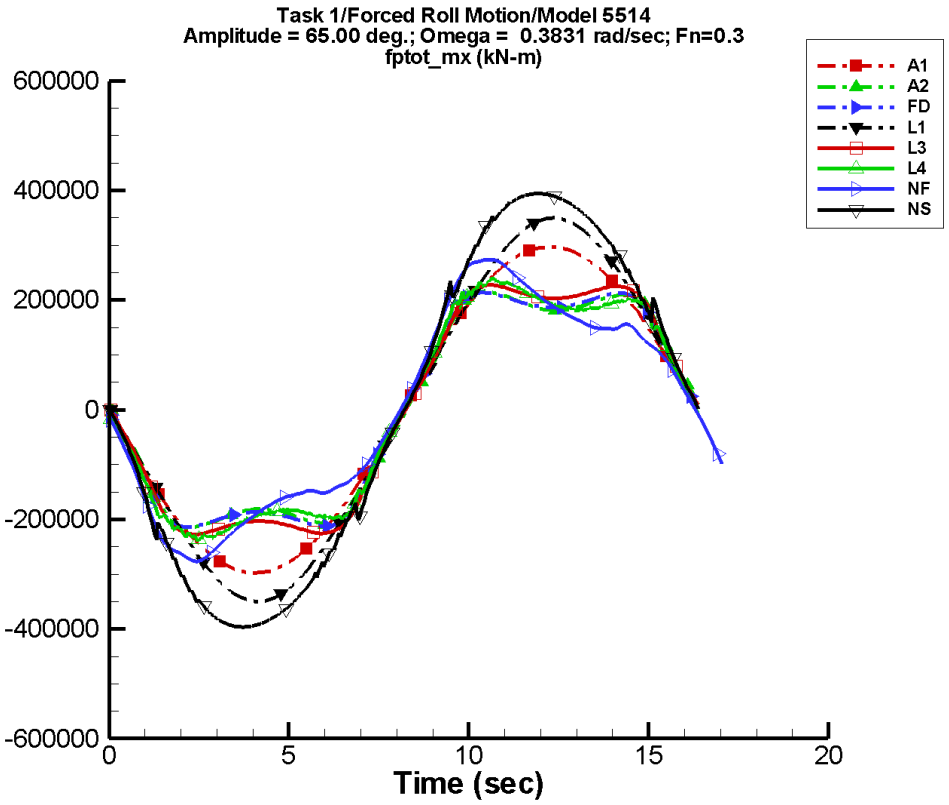


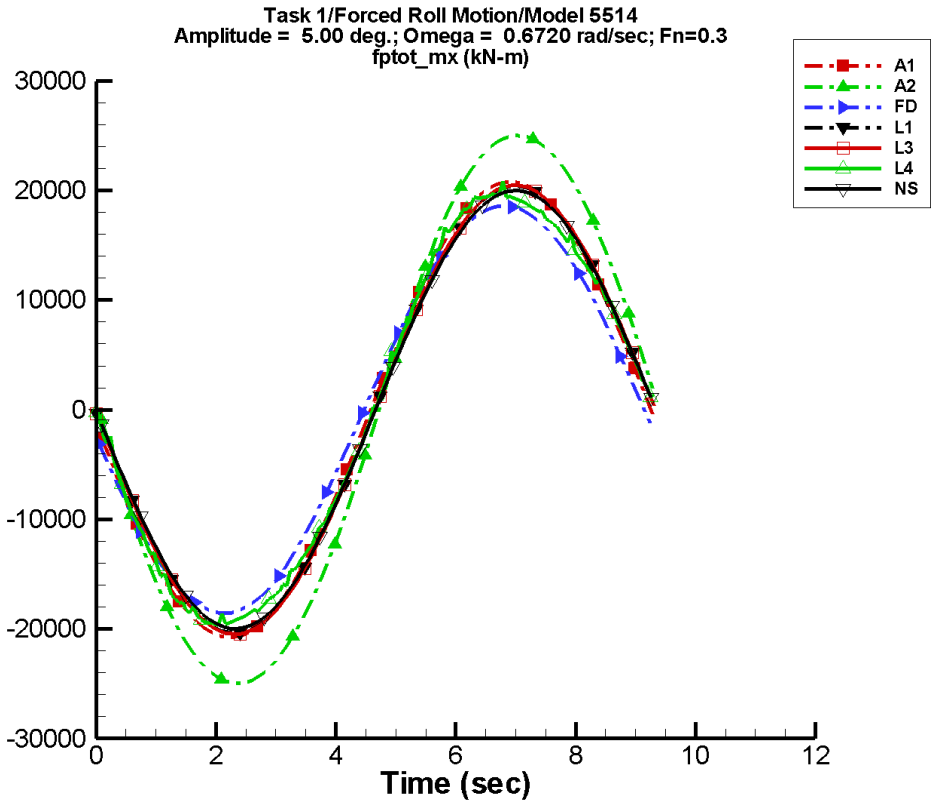

Figure D–145. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–289. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -14.6 | 2.97E+05 | -179 | 54.9 | 51 |
| A2 | -754. | 2.35E+05 | 180 | 7.90E+03 | -129 |
| FD | -1.28E+03 | 2.37E+05 | -179 | 9.34E+03 | -104 |
| L1 | 801. | 3.36E+05 | 179 | 1.53E+03 | 29 |
| L3 | -2.44E+03 | 2.57E+05 | 180 | 4.88E+03 | -165 |
| L4 | -2.44E+03 | 2.47E+05 | -176 | 5.07E+03 | -165 |
| NF | -5.08E+03 | 2.44E+05 | -131 | 5.78E+03 | 55 |
| NS | -561. | 3.97E+05 | -178 | 490. | 97 |

Table D–290. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.97E+05 | 2.97E+05 | -2.98E+05 | 2.96E+05 |
| A2 | -2.16E+05 | 2.17E+05 | -2.14E+05 | 2.14E+05 |
| FD | -2.14E+05 | 2.14E+05 | -2.12E+05 | 2.12E+05 |
| L1 | -3.50E+05 | 3.50E+05 | -3.49E+05 | 3.49E+05 |
| L3 | -2.28E+05 | 2.28E+05 | -2.27E+05 | 2.27E+05 |
| L4 | -2.39E+05 | 2.42E+05 | -2.33E+05 | 2.34E+05 |
| NF | -2.77E+05 | 2.74E+05 | -2.70E+05 | 2.71E+05 |
| NS | -3.97E+05 | 3.95E+05 | -3.97E+05 | 3.94E+05 |




Data identically zero, insufficient, or not available from NFA.

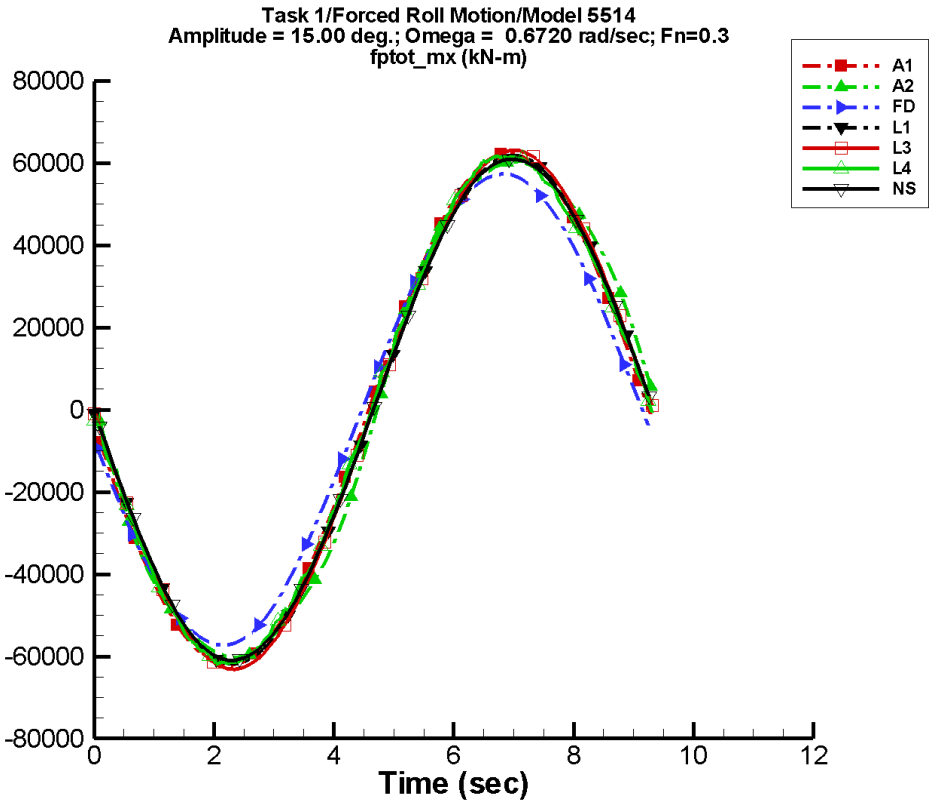
Figure D–146. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–291. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.04 | 2.08E+04 | -176 | 10.9 | -86 |
| A2 | -23.7 | 2.53E+04 | 179 | 54.2 | -130 |
| FD | 0.679 | 1.86E+04 | -172 | 1.14 | 149 |
| L1 | 0.137 | 2.04E+04 | -179 | 0.759 | 23 |
| L3 | 1.30 | 2.05E+04 | -179 | 3.09 | 42 |
| L4 | 35.9 | 2.00E+04 | -177 | 87.9 | 145 |
| NF | — | — | — | — | — |
| NS | -0.867 | 2.00E+04 | -180 | 1.10 | 177 |

Table D–292. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.07E+04 | 2.08E+04 | -2.05E+04 | 2.06E+04 |
| A2 | -2.50E+04 | 2.50E+04 | -2.47E+04 | 2.47E+04 |
| FD | -1.86E+04 | 1.86E+04 | -1.84E+04 | 1.84E+04 |
| L1 | -2.04E+04 | 2.04E+04 | -2.03E+04 | 2.03E+04 |
| L3 | -2.05E+04 | 2.05E+04 | -2.04E+04 | 2.04E+04 |
| L4 | -1.97E+04 | 2.08E+04 | -1.94E+04 | 1.97E+04 |
| NF | — | — | — | — |
| NS | -2.00E+04 | 2.00E+04 | -1.98E+04 | 1.98E+04 |




Data identically zero, insufficient, or not available from NFA.

Figure D–147. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–293. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.10 | 6.23E+04 | -176 | 32.7 | -86 |
| A2 | -192. | 6.27E+04 | 179 | 485. | -130 |
| FD | 37.1 | 5.69E+04 | -172 | 68.6 | 148 |
| L1 | 9.66 | 6.16E+04 | -179 | 20.6 | 25 |
| L3 | 26.7 | 6.26E+04 | -179 | 52.8 | 27 |
| L4 | 119. | 6.13E+04 | -178 | 232. | 46 |
| NF | — | — | — | — | — |
| NS | -1.35 | 6.09E+04 | -179 | 2.91 | -171 |

Table D–294. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.22E+04 | 6.24E+04 | -6.15E+04 | 6.16E+04 |
| A2 | -6.02E+04 | 6.04E+04 | -5.96E+04 | 5.97E+04 |
| FD | -5.73E+04 | 5.73E+04 | -5.67E+04 | 5.66E+04 |
| L1 | -6.18E+04 | 6.18E+04 | -6.16E+04 | 6.16E+04 |
| L3 | -6.31E+04 | 6.31E+04 | -6.28E+04 | 6.28E+04 |
| L4 | -6.18E+04 | 6.15E+04 | -6.14E+04 | 6.15E+04 |
| NF | — | — | — | — |
| NS | -6.09E+04 | 6.09E+04 | -6.03E+04 | 6.03E+04 |

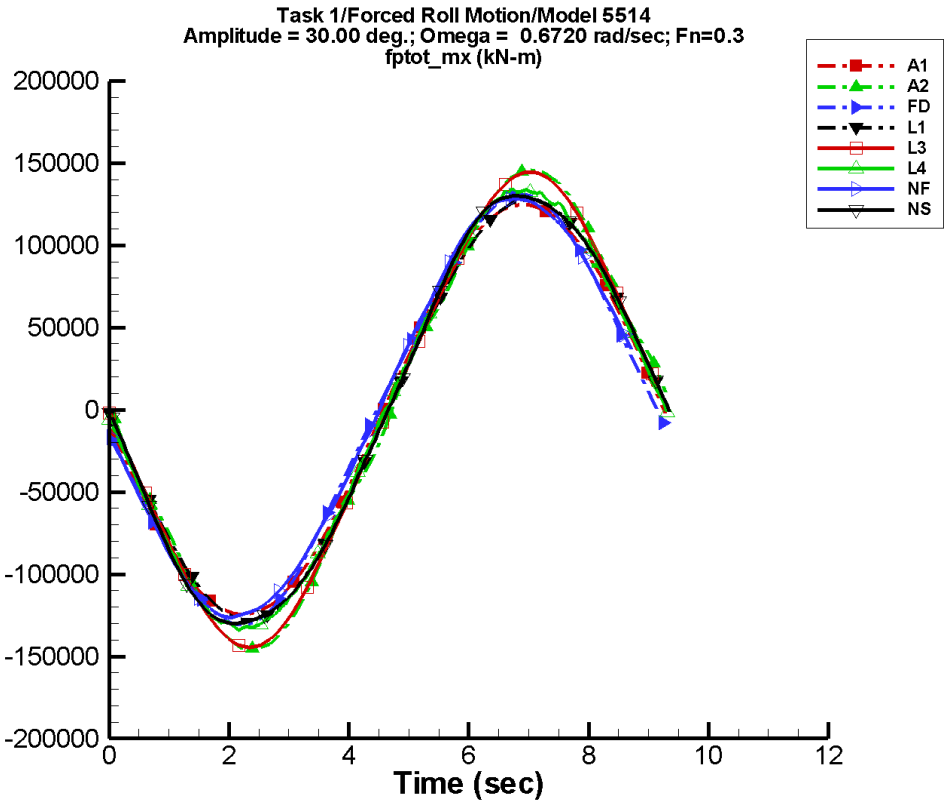



Figure D–148. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–295. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -18.2 | 1.25E+05 | -176 | 65.5 | -86 |
| A2 | 58.4 | 1.38E+05 | 179 | 1.13E+03 | 7 |
| FD | 406. | 1.26E+05 | -173 | 766. | 146 |
| L1 | 83.3 | 1.26E+05 | -179 | 163. | 25 |
| L3 | 362. | 1.38E+05 | -180 | 696. | 22 |
| L4 | 270. | 1.31E+05 | -178 | 249. | -16 |
| NF | -3.81E+03 | 1.27E+05 | 137 | 4.88E+03 | -95 |
| NS | 9.35 | 1.30E+05 | -178 | 15.1 | -111 |

Table D–296. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.24E+05 | 1.25E+05 | -1.23E+05 | 1.23E+05 |
| A2 | -1.45E+05 | 1.46E+05 | -1.43E+05 | 1.44E+05 |
| FD | -1.31E+05 | 1.31E+05 | -1.29E+05 | 1.29E+05 |
| L1 | -1.28E+05 | 1.28E+05 | -1.27E+05 | 1.27E+05 |
| L3 | -1.45E+05 | 1.45E+05 | -1.44E+05 | 1.44E+05 |
| L4 | -1.34E+05 | 1.35E+05 | -1.32E+05 | 1.33E+05 |
| NF | -1.30E+05 | 1.31E+05 | -1.30E+05 | 1.32E+05 |
| NS | -1.30E+05 | 1.30E+05 | -1.30E+05 | 1.30E+05 |

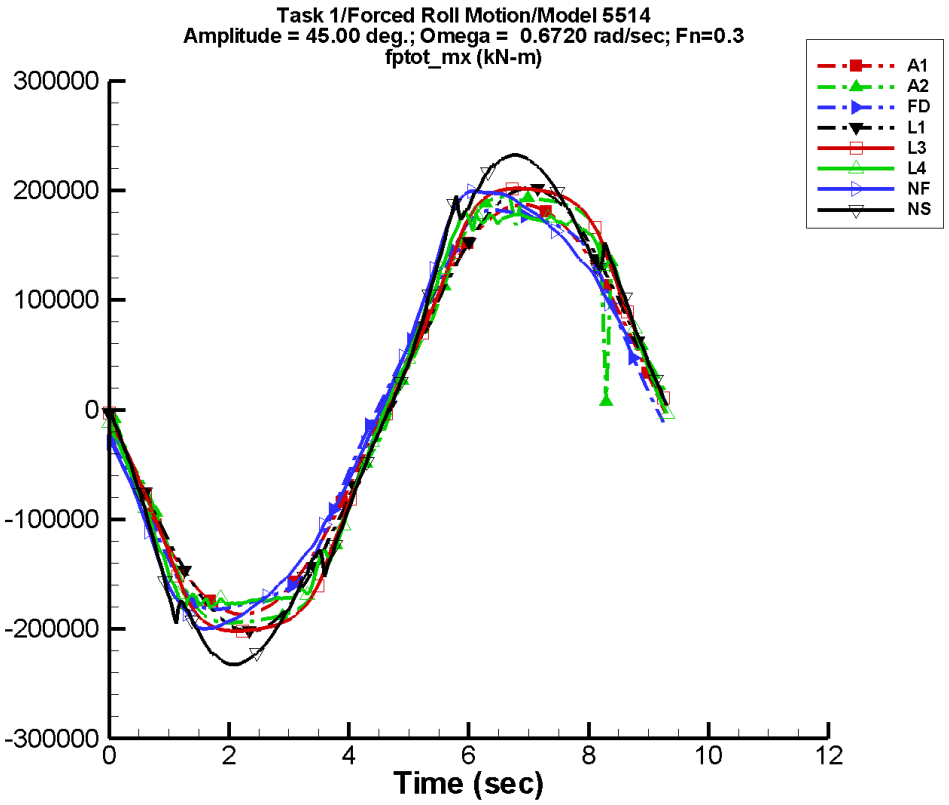



Figure D–149. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–297. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -27.3 | 1.87E+05 | -176 | 98.2 | -86 |
| A2 | -2.07E+03 | 2.03E+05 | 179 | 2.30E+03 | 26 |
| FD | -229. | 1.87E+05 | -173 | 651. | 33 |
| L1 | 280. | 1.97E+05 | -180 | 539. | 25 |
| L3 | -42.6 | 2.11E+05 | -180 | 838. | 109 |
| L4 | -1.41E+03 | 1.97E+05 | -177 | 2.43E+03 | -172 |
| NF | -5.05E+03 | 2.00E+05 | 140 | 7.69E+03 | -105 |
| NS | 41.2 | 2.25E+05 | -177 | 42.7 | -117 |

Table D–298. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.87E+05 | 1.87E+05 | -1.85E+05 | 1.85E+05 |
| A2 | -1.94E+05 | 1.95E+05 | -1.94E+05 | 1.91E+05 |
| FD | -1.82E+05 | 1.82E+05 | -1.81E+05 | 1.81E+05 |
| L1 | -2.02E+05 | 2.02E+05 | -2.01E+05 | 2.01E+05 |
| L3 | -2.02E+05 | 2.02E+05 | -2.02E+05 | 2.02E+05 |
| L4 | -1.86E+05 | 1.81E+05 | -1.76E+05 | 1.76E+05 |
| NF | -2.02E+05 | 2.05E+05 | -2.01E+05 | 2.04E+05 |
| NS | -2.32E+05 | 2.33E+05 | -2.32E+05 | 2.32E+05 |

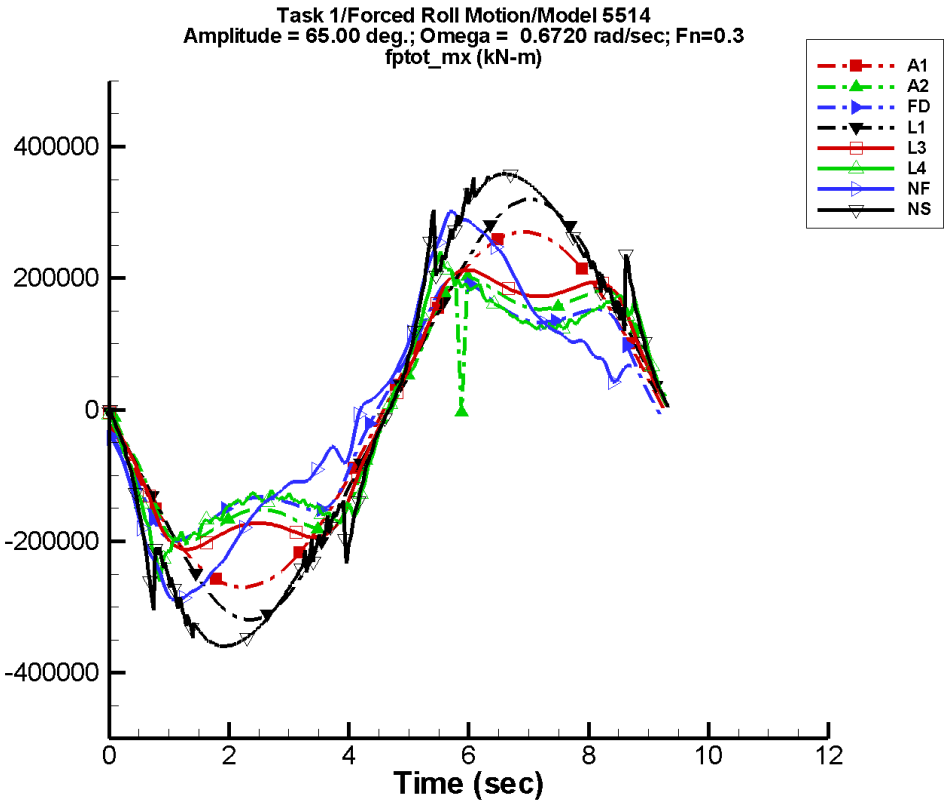


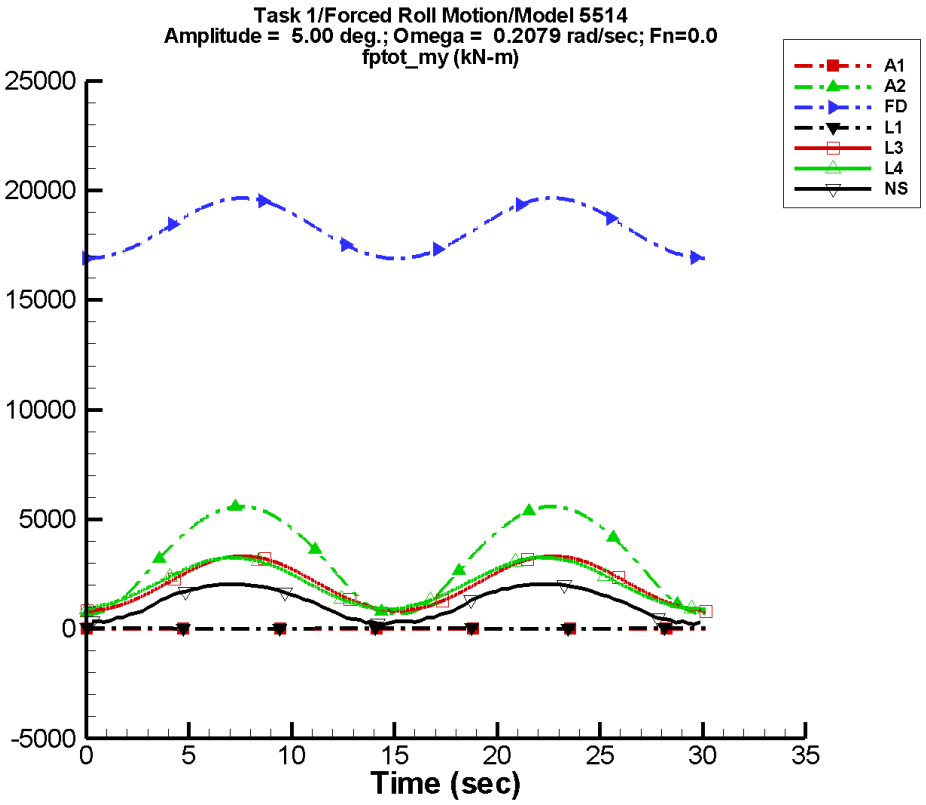

Figure D–150. Time history of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–299. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -39.5 | 2.70E+05 | -176 | 142. | -86 |
| A2 | -4.52E+03 | 2.07E+05 | -180 | 9.69E+03 | -169 |
| FD | -3.44E+03 | 1.87E+05 | -168 | 6.55E+03 | -29 |
| L1 | 815. | 3.06E+05 | -180 | 1.56E+03 | 26 |
| L3 | -2.66E+03 | 2.28E+05 | -178 | 5.29E+03 | -171 |
| L4 | -5.59E+03 | 2.00E+05 | -173 | 9.89E+03 | -162 |
| NF | -3.82E+03 | 2.40E+05 | 153 | 1.03E+04 | -87 |
| NS | -280. | 3.53E+05 | -175 | 284. | 161 |

Table D–300. Minimum and maximum of of $M_x^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.70E+05 | 2.70E+05 | -2.67E+05 | 2.67E+05 |
| A2 | -2.03E+05 | 2.03E+05 | -1.96E+05 | 1.77E+05 |
| FD | -2.00E+05 | 2.00E+05 | -1.91E+05 | 1.91E+05 |
| L1 | -3.20E+05 | 3.20E+05 | -3.18E+05 | 3.18E+05 |
| L3 | -2.12E+05 | 2.12E+05 | -2.11E+05 | 2.10E+05 |
| L4 | -2.60E+05 | 2.40E+05 | -2.17E+05 | 2.11E+05 |
| NF | -2.98E+05 | 3.17E+05 | -2.94E+05 | 3.01E+05 |
| NS | -3.60E+05 | 3.59E+05 | -3.60E+05 | 3.59E+05 |




Data identically zero, insufficient, or not available from NFA.

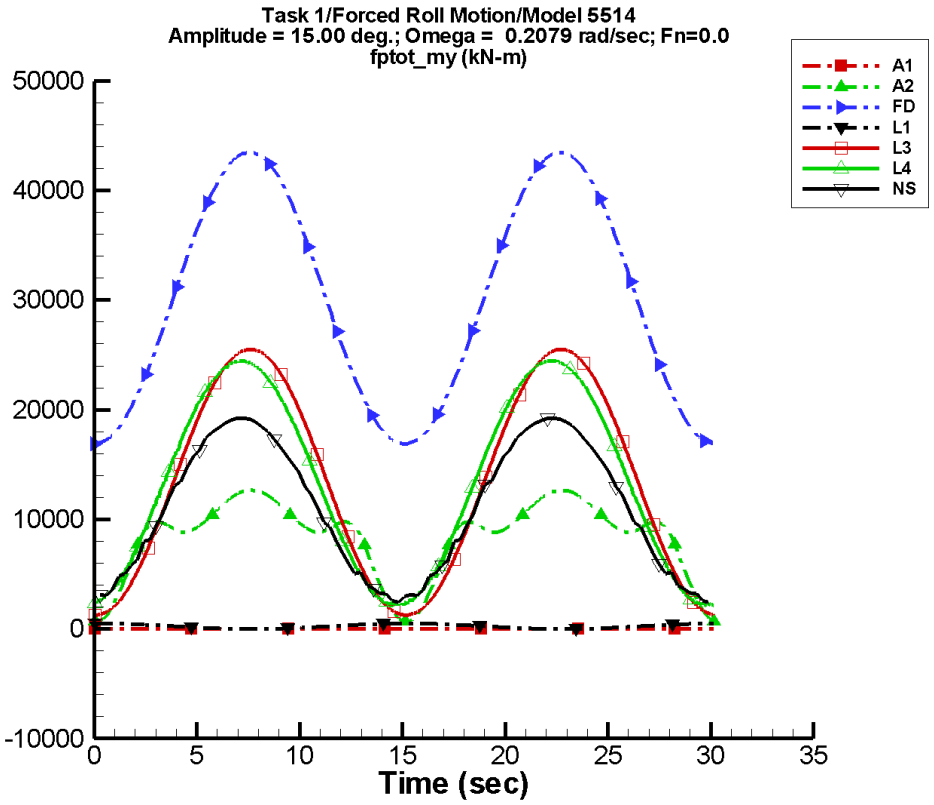
Figure D–151. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–301. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.33E-04 | 3.70E-02 | 14 | 3.14E-04 | 107 |
| A2 | 3.26E+03 | 1.85 | 21 | 2.47E+03 | -90 |
| FD | 1.82E+04 | 0.739 | -176 | 1.38E+03 | -90 |
| L1 | 27.9 | 1.45E-02 | 172 | 27.9 | 87 |
| L3 | 2.06E+03 | 1.86 | 118 | 1.25E+03 | -91 |
| L4 | 2.07E+03 | 4.97 | 178 | 1.18E+03 | -80 |
| NF | — | — | — | — | — |
| NS | 1.17E+03 | 0.631 | -12 | 922. | -82 |

Table D–302. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -0.244 | 0.244 | -6.74E-02 | 6.82E-02 |
| A2 | 724. | 5.59E+03 | 711. | 5.58E+03 |
| FD | 1.69E+04 | 1.97E+04 | 1.69E+04 | 1.96E+04 |
| L1 | -1.57E-02 | 55.9 | 2.91E-02 | 55.9 |
| L3 | 812. | 3.32E+03 | 814. | 3.32E+03 |
| L4 | 900. | 3.27E+03 | 912. | 3.26E+03 |
| NF | — | — | — | — |
| NS | 199. | 2.05E+03 | 275. | 2.02E+03 |




Data identically zero, insufficient, or not available from NFA.

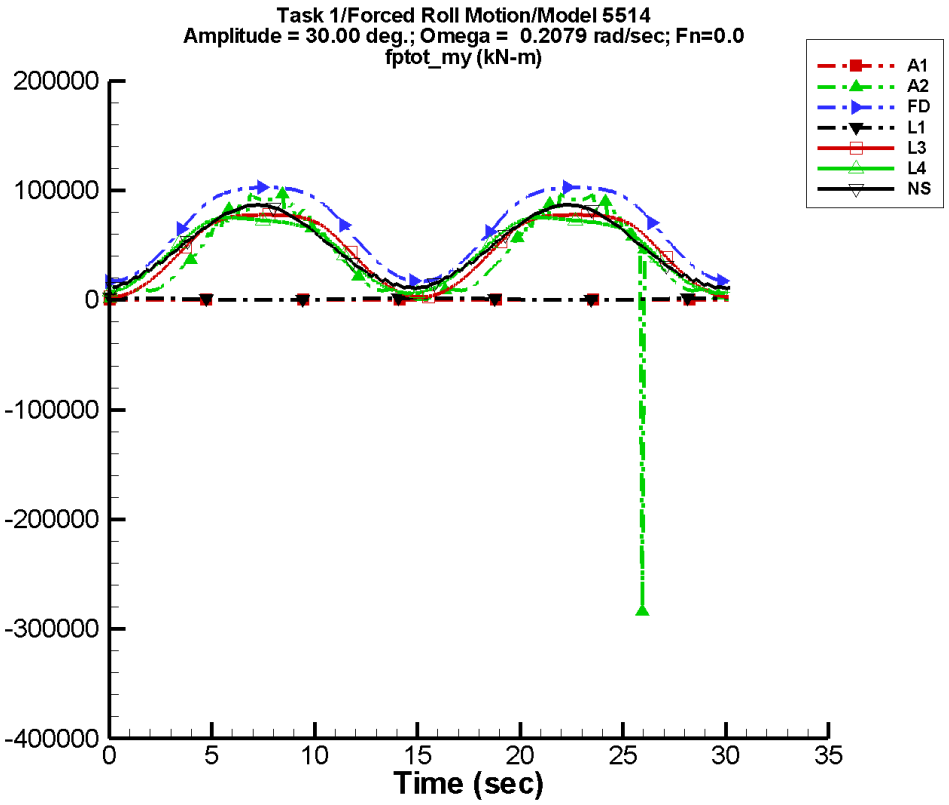
Figure D–152. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–303. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.00E-03 | 0.111 | 14 | 9.41E-04 | 107 |
| A2 | 8.28E+03 | 33.0 | -45 | 4.25E+03 | -91 |
| FD | 3.00E+04 | 3.54 | -177 | 1.33E+04 | -90 |
| L1 | 251. | 4.98E-02 | 159 | 251. | 87 |
| L3 | 1.33E+04 | 7.64 | 118 | 1.22E+04 | -91 |
| L4 | 1.33E+04 | 31.9 | -166 | 1.12E+04 | -81 |
| NF | — | — | — | — | — |
| NS | 1.09E+04 | 6.07 | -13 | 8.28E+03 | -81 |

Table D–304. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -0.733 | 0.733 | -0.202 | 0.205 |
| A2 | 724. | 1.27E+04 | 706. | 1.26E+04 |
| FD | 1.69E+04 | 4.35E+04 | 1.69E+04 | 4.34E+04 |
| L1 | -3.52E-02 | 503. | 0.364 | 503. |
| L3 | 1.26E+03 | 2.55E+04 | 1.28E+03 | 2.55E+04 |
| L4 | 2.12E+03 | 2.45E+04 | 2.22E+03 | 2.45E+04 |
| NF | — | — | — | — |
| NS | 2.37E+03 | 1.92E+04 | 2.66E+03 | 1.89E+04 |




Data identically zero, insufficient, or not available from NFA.

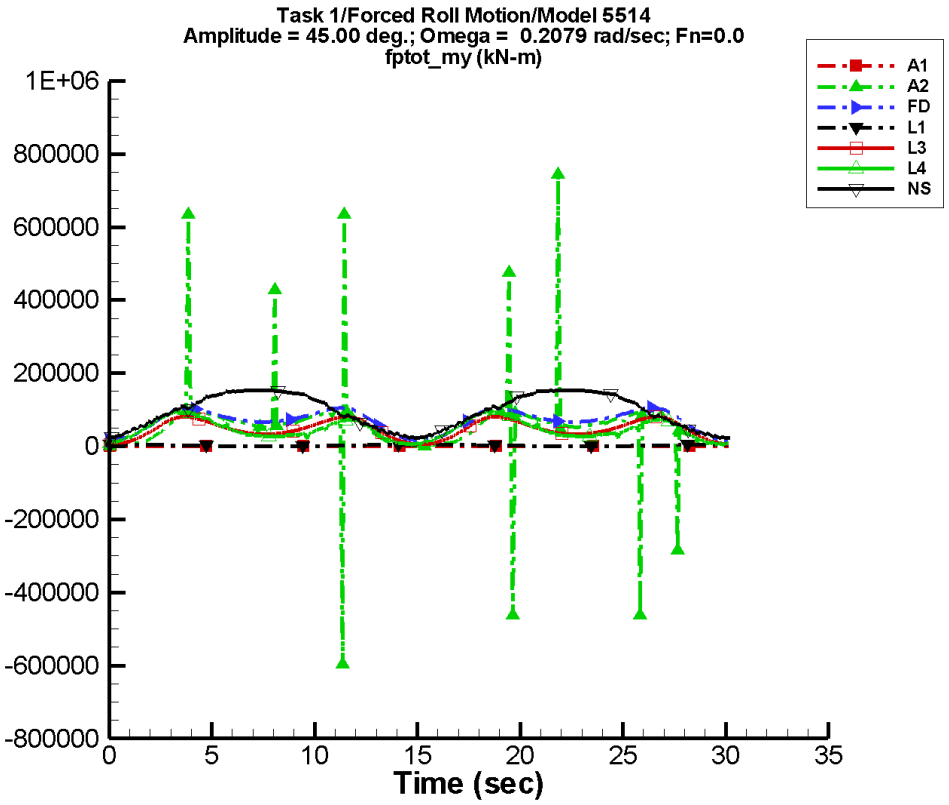
Figure D–153. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–305. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.00E-03 | 0.222 | 14 | 1.88E-03 | 107 |
| A2 | 4.11E+04 | 2.02E+03 | -44 | 4.51E+04 | -90 |
| FD | 6.51E+04 | 143. | 12 | 4.49E+04 | -90 |
| L1 | 1.00E+03 | 0.123 | 145 | 1.00E+03 | 87 |
| L3 | 4.59E+04 | 331. | -58 | 3.90E+04 | -91 |
| L4 | 4.56E+04 | 226. | -67 | 3.50E+04 | -79 |
| NF | — | — | — | — | — |
| NS | 4.82E+04 | 27.9 | -13 | 3.73E+04 | -81 |

Table D–306. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.47 | 1.47 | -0.404 | 0.409 |
| A2 | -2.84E+05 | 9.66E+04 | 612. | 9.33E+04 |
| FD | 1.69E+04 | 1.03E+05 | 1.68E+04 | 1.03E+05 |
| L1 | -4.51E-02 | 2.01E+03 | 1.53 | 2.01E+03 |
| L3 | 2.77E+03 | 7.77E+04 | 2.83E+03 | 7.77E+04 |
| L4 | 5.92E+03 | 7.55E+04 | 6.38E+03 | 7.54E+04 |
| NF | — | — | — | — |
| NS | 1.03E+04 | 8.68E+04 | 1.08E+04 | 8.62E+04 |




Data identically zero, insufficient, or not available from NFA.

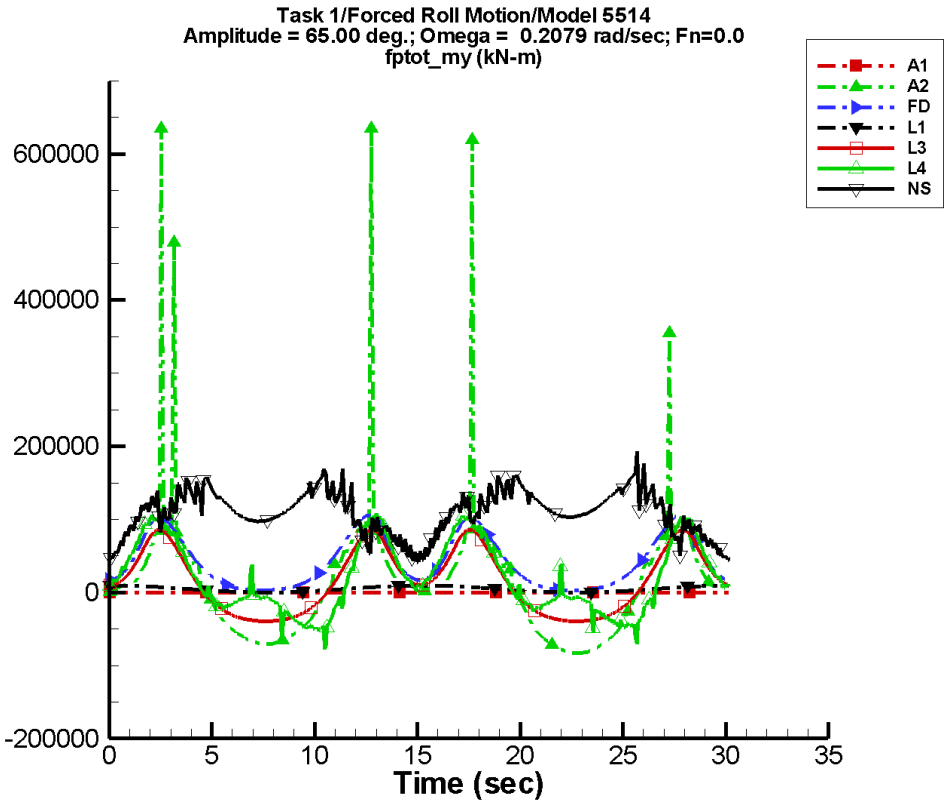
Figure D–154. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–307. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.00E-03 | 0.333 | 14 | 2.82E-03 | 107 |
| A2 | 5.33E+04 | 4.03E+03 | -38 | 3.73E+04 | -76 |
| FD | 6.95E+04 | 640. | 5 | 2.27E+04 | -85 |
| L1 | 2.26E+03 | 0.225 | 135 | 2.26E+03 | 87 |
| L3 | 4.75E+04 | 2.34E+03 | -61 | 8.78E+03 | -91 |
| L4 | 4.72E+04 | 2.17E+03 | -63 | 1.30E+04 | -10 |
| NF | — | — | — | — | — |
| NS | 9.61E+04 | 48.0 | -13 | 6.43E+04 | -82 |

Table D–308. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.20 | 2.20 | -0.607 | 0.614 |
| A2 | -5.97E+05 | 7.43E+05 | 731. | 1.64E+05 |
| FD | 1.69E+04 | 1.05E+05 | 1.70E+04 | 1.04E+05 |
| L1 | -5.11E-02 | 4.53E+03 | 3.48 | 4.52E+03 |
| L3 | 5.28E+03 | 8.05E+04 | 5.43E+03 | 8.02E+04 |
| L4 | 4.47E+03 | 9.57E+04 | 5.97E+03 | 9.47E+04 |
| NF | — | — | — | — |
| NS | 2.15E+04 | 1.54E+05 | 2.24E+04 | 1.53E+05 |




Data identically zero, insufficient, or not available from NFA.

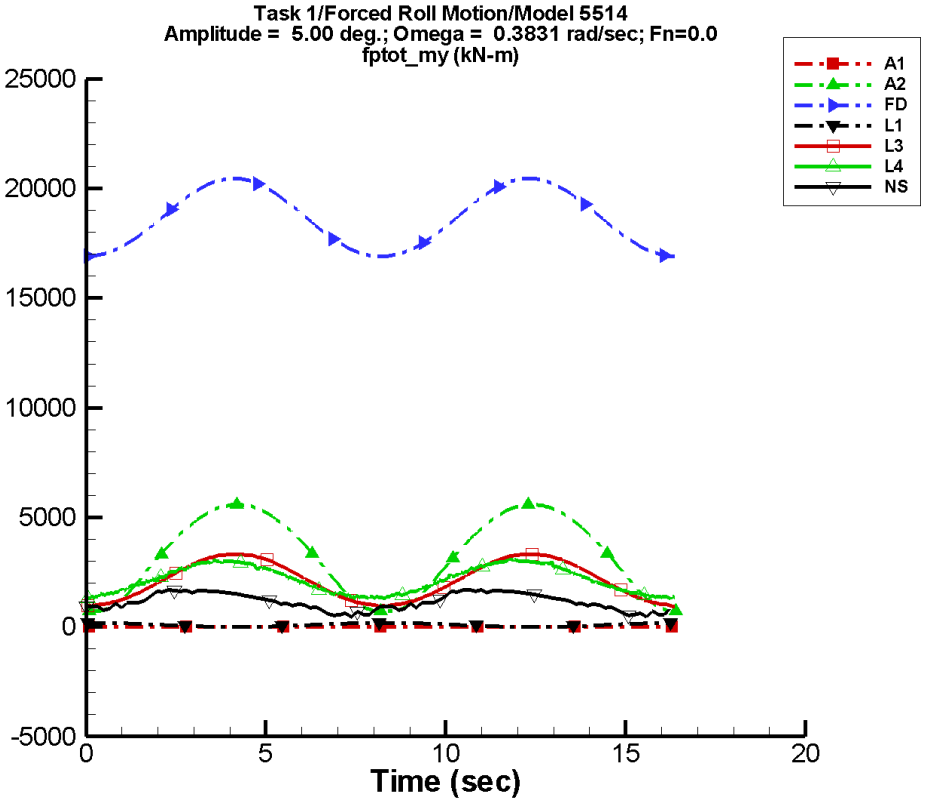
Figure D–155. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–309. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.33E-03 | 0.481 | 14 | 4.08E-03 | 107 |
| A2 | 1.17E+04 | 5.88E+03 | -24 | 6.16E+04 | 83 |
| FD | 4.22E+04 | 572. | -12 | 2.87E+04 | 88 |
| L1 | 4.72E+03 | 0.408 | 127 | 4.72E+03 | 87 |
| L3 | 1.69E+04 | 2.96E+03 | -64 | 4.95E+04 | 88 |
| L4 | 2.15E+04 | 2.52E+03 | -76 | 5.24E+04 | 71 |
| NF | — | — | — | — | — |
| NS | 1.09E+05 | 2.10E+03 | -178 | 2.43E+04 | -77 |

Table D–310. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.17 | 3.18 | -0.876 | 0.887 |
| A2 | -8.33E+04 | 6.35E+05 | -8.28E+04 | 1.77E+05 |
| FD | 2.83E+03 | 1.05E+05 | 2.91E+03 | 1.03E+05 |
| L1 | -5.11E-02 | 9.44E+03 | 7.34 | 9.44E+03 |
| L3 | -3.94E+04 | 8.55E+04 | -3.93E+04 | 8.46E+04 |
| L4 | -7.79E+04 | 1.08E+05 | -5.47E+04 | 1.03E+05 |
| NF | — | — | — | — |
| NS | 4.10E+04 | 1.93E+05 | 4.56E+04 | 1.56E+05 |




Data identically zero, insufficient, or not available from NFA.

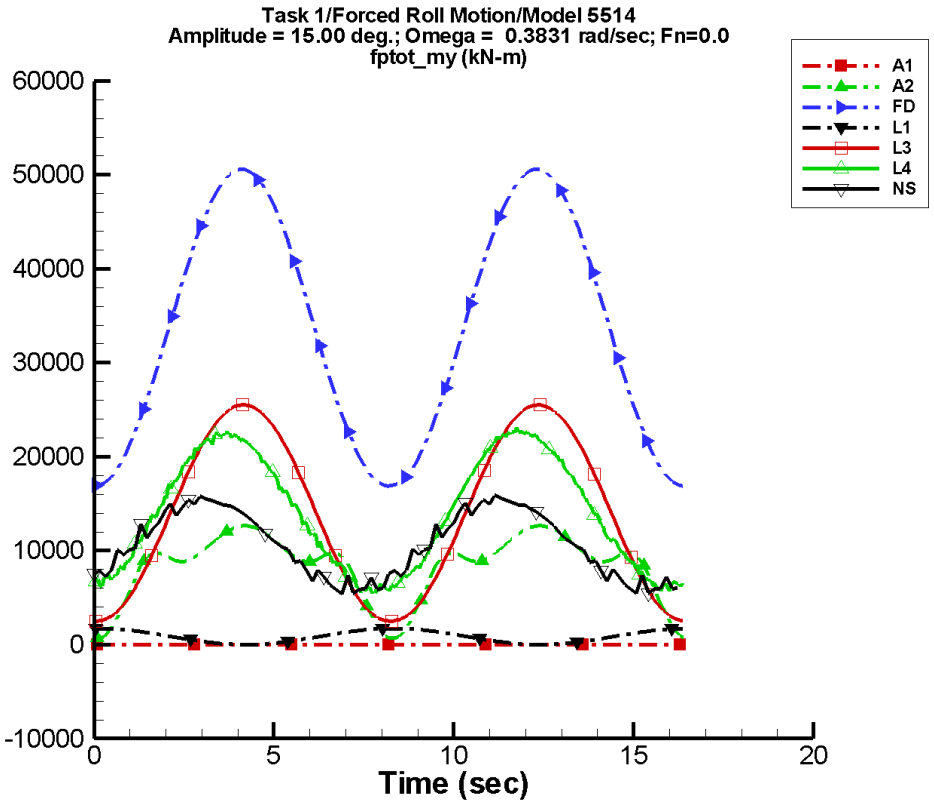
Figure D–156. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–311. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.34E-04 | 0.431 | -17 | 9.68E-03 | 129 |
| A2 | 3.26E+03 | 1.79 | 6 | 2.47E+03 | -94 |
| FD | 1.86E+04 | 1.34 | 121 | 1.78E+03 | -90 |
| L1 | 95.5 | 3.53E-02 | -156 | 95.5 | 85 |
| L3 | 2.12E+03 | 1.14 | 179 | 1.18E+03 | -93 |
| L4 | 2.15E+03 | 24.0 | -168 | 833. | -78 |
| NF | — | — | — | — | — |
| NS | 1.15E+03 | 0.828 | -142 | 516. | -53 |

Table D–312. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -0.682 | 0.539 | -0.432 | 0.465 |
| A2 | 724. | 5.59E+03 | 703. | 5.58E+03 |
| FD | 1.69E+04 | 2.05E+04 | 1.69E+04 | 2.04E+04 |
| L1 | 1.05E-03 | 191. | 0.513 | 191. |
| L3 | 947. | 3.32E+03 | 955. | 3.31E+03 |
| L4 | 1.28E+03 | 3.13E+03 | 1.34E+03 | 3.04E+03 |
| NF | — | — | — | — |
| NS | 442. | 1.69E+03 | 600. | 1.65E+03 |




Data identically zero, insufficient, or not available from NFA.

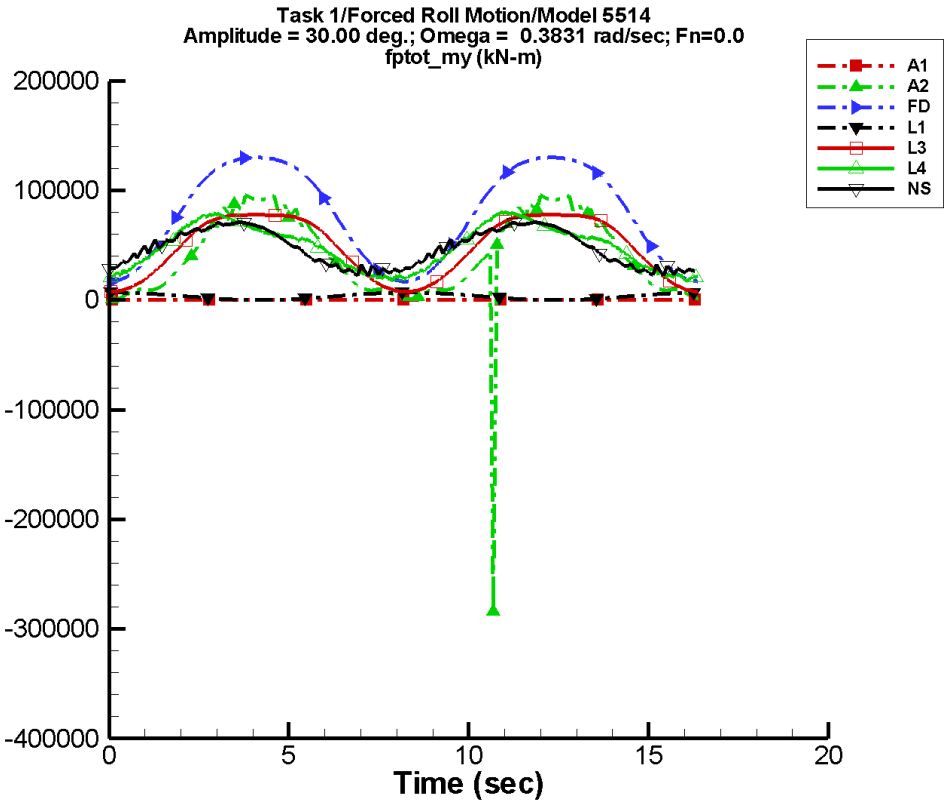
Figure D–157. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–313. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.60E-03 | 1.29 | -17 | 2.90E-02 | 129 |
| A2 | 8.28E+03 | 36.0 | -47 | 4.25E+03 | -93 |
| FD | 3.36E+04 | 7.54 | 120 | 1.69E+04 | -90 |
| L1 | 859. | 0.117 | -140 | 859. | 85 |
| L3 | 1.39E+04 | 5.59 | 166 | 1.16E+04 | -92 |
| L4 | 1.39E+04 | 170. | -176 | 8.32E+03 | -73 |
| NF | — | — | — | — | — |
| NS | 1.06E+04 | 8.74 | -146 | 4.76E+03 | -47 |

Table D–314. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.05 | 1.62 | -1.29 | 1.39 |
| A2 | 724. | 1.27E+04 | 823. | 1.26E+04 |
| FD | 1.69E+04 | 5.06E+04 | 1.70E+04 | 5.03E+04 |
| L1 | 0.220 | 1.72E+03 | 4.82 | 1.72E+03 |
| L3 | 2.47E+03 | 2.55E+04 | 2.47E+03 | 2.54E+04 |
| L4 | 5.48E+03 | 2.31E+04 | 5.84E+03 | 2.26E+04 |
| NF | — | — | — | — |
| NS | 5.40E+03 | 1.59E+04 | 6.12E+03 | 1.53E+04 |




Data identically zero, insufficient, or not available from NFA.

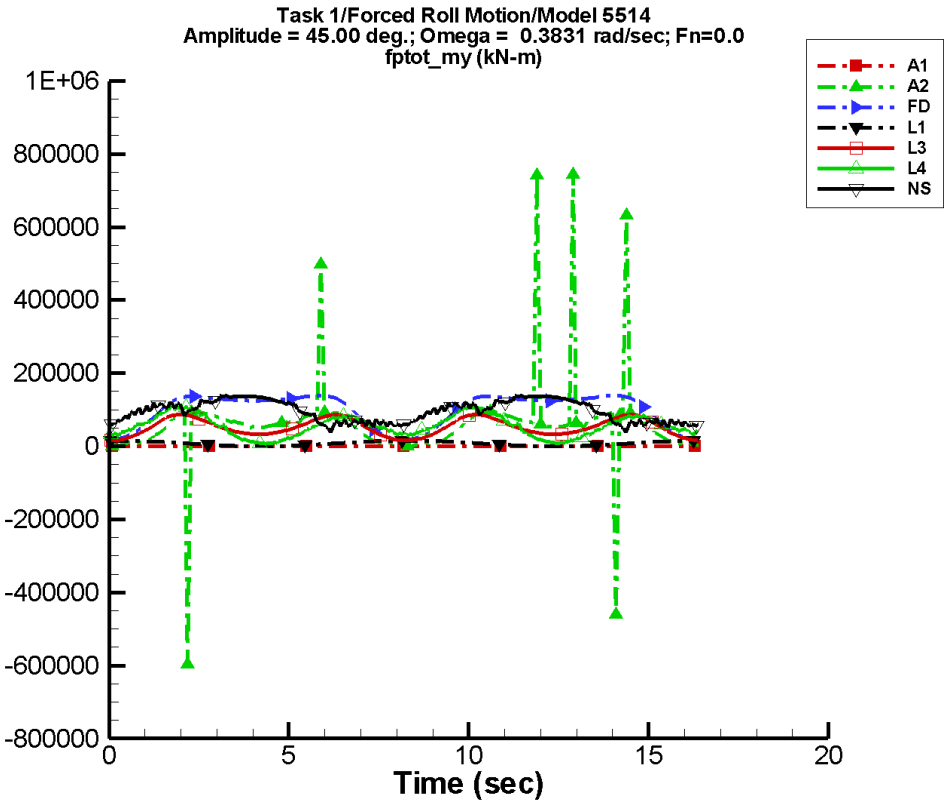
Figure D–158. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–315. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.20E-03 | 2.59 | -17 | 5.80E-02 | 129 |
| A2 | 4.05E+04 | 4.29E+03 | 35 | 4.53E+04 | -100 |
| FD | 7.91E+04 | 305. | -58 | 5.82E+04 | -90 |
| L1 | 3.44E+03 | 0.285 | -122 | 3.44E+03 | 85 |
| L3 | 4.82E+04 | 185. | -36 | 3.71E+04 | -92 |
| L4 | 4.86E+04 | 443. | -139 | 2.70E+04 | -64 |
| NF | — | — | — | — | — |
| NS | 4.72E+04 | 39.1 | -146 | 2.27E+04 | -52 |

Table D–316. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.09 | 3.23 | -2.59 | 2.79 |
| A2 | -2.84E+05 | 9.58E+04 | 1.07E+03 | 9.23E+04 |
| FD | 1.69E+04 | 1.30E+05 | 1.75E+04 | 1.30E+05 |
| L1 | 0.801 | 6.88E+03 | 19.2 | 6.87E+03 |
| L3 | 7.62E+03 | 7.77E+04 | 7.57E+03 | 7.77E+04 |
| L4 | 1.75E+04 | 8.01E+04 | 2.01E+04 | 7.93E+04 |
| NF | — | — | — | — |
| NS | 2.22E+04 | 7.11E+04 | 2.63E+04 | 7.03E+04 |




Data identically zero, insufficient, or not available from NFA.

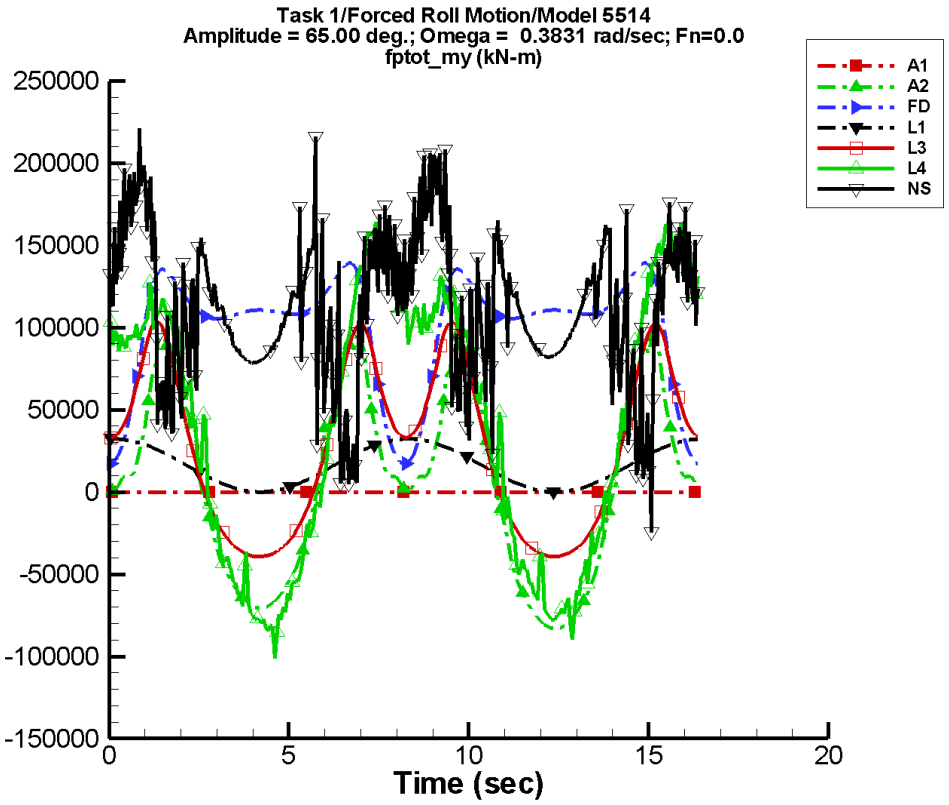
Figure D–159. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–317. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.81E-03 | 3.88 | -17 | 8.71E-02 | 129 |
| A2 | 6.21E+04 | 1.57E+04 | -166 | 4.45E+04 | -102 |
| FD | 9.99E+04 | 1.48E+03 | -60 | 4.95E+04 | -90 |
| L1 | 7.73E+03 | 0.523 | -108 | 7.73E+03 | 85 |
| L3 | 5.23E+04 | 1.49E+03 | -12 | 7.70E+03 | -74 |
| L4 | 5.49E+04 | 331. | -46 | 1.82E+04 | 38 |
| NF | — | — | — | — | — |
| NS | 9.63E+04 | 75.8 | -148 | 3.77E+04 | -54 |

Table D–318. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.14 | 4.85 | -3.88 | 4.18 |
| A2 | -5.97E+05 | 7.43E+05 | -1.10E+03 | 1.50E+05 |
| FD | 1.69E+04 | 1.39E+05 | 1.83E+04 | 1.37E+05 |
| L1 | 1.63 | 1.55E+04 | 43.0 | 1.55E+04 |
| L3 | 1.62E+04 | 8.67E+04 | 1.62E+04 | 8.58E+04 |
| L4 | 7.22E+03 | 1.09E+05 | 8.66E+03 | 1.06E+05 |
| NF | — | — | — | — |
| NS | 3.66E+04 | 1.39E+05 | 5.50E+04 | 1.37E+05 |




Data identically zero, insufficient, or not available from NFA.

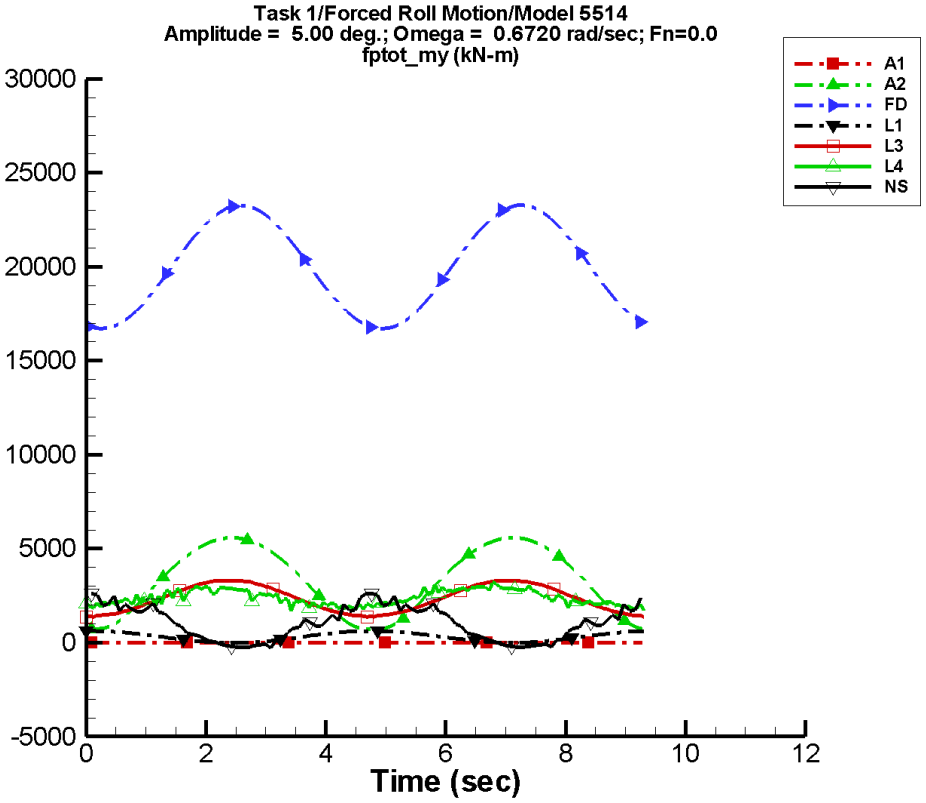
Figure D–160. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–319. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.94E-03 | 5.61 | -17 | 0.126 | 129 |
| A2 | 5.62E+03 | 4.59E+03 | -8 | 5.64E+04 | 82 |
| FD | 9.95E+04 | 783. | -62 | 2.34E+04 | -90 |
| L1 | 1.61E+04 | 1.01 | -99 | 1.61E+04 | 85 |
| L3 | 2.76E+04 | 1.93E+03 | -1 | 5.64E+04 | 84 |
| L4 | 4.15E+04 | 2.22E+03 | -166 | 1.04E+05 | 86 |
| NF | — | — | — | — | — |
| NS | 1.11E+05 | 1.59E+03 | -174 | 2.28E+04 | 61 |

Table D–320. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.87 | 7.00 | -5.61 | 6.04 |
| A2 | -8.33E+04 | 9.87E+04 | -8.17E+04 | 8.42E+04 |
| FD | 1.70E+04 | 1.39E+05 | 2.01E+04 | 1.35E+05 |
| L1 | 3.21 | 3.23E+04 | 89.5 | 3.23E+04 |
| L3 | -3.93E+04 | 1.04E+05 | -3.91E+04 | 1.01E+05 |
| L4 | -1.01E+05 | 1.70E+05 | -8.40E+04 | 1.55E+05 |
| NF | — | — | — | — |
| NS | -2.51E+04 | 2.22E+05 | 2.02E+04 | 1.90E+05 |




Data identically zero, insufficient, or not available from NFA.

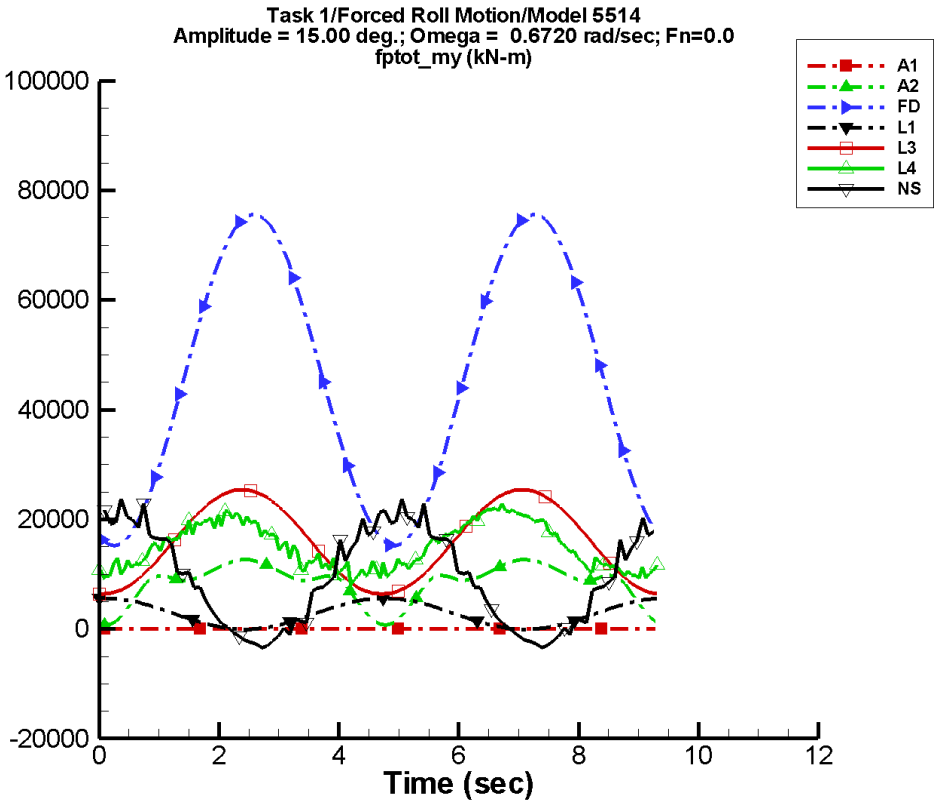
Figure D–161. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–321. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.94E-03 | 2.82 | -116 | 1.75E-02 | 134 |
| A2 | 3.26E+03 | 9.31 | -18 | 2.47E+03 | -97 |
| FD | 2.00E+04 | 2.18 | 150 | 3.29E+03 | -109 |
| L1 | 306. | 0.101 | 175 | 316. | 83 |
| L3 | 2.33E+03 | 1.84 | -179 | 958. | -94 |
| L4 | 2.38E+03 | 89.5 | -152 | 492. | -68 |
| NF | — | — | — | — | — |
| NS | 1.03E+03 | 3.23 | -170 | 1.23E+03 | 67 |

Table D–322. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.54 | 3.72 | -2.96 | 2.85 |
| A2 | 722. | 5.59E+03 | 713. | 5.49E+03 |
| FD | 1.67E+04 | 2.33E+04 | 1.67E+04 | 2.33E+04 |
| L1 | -10.1 | 622. | -4.96 | 623. |
| L3 | 1.38E+03 | 3.31E+03 | 1.40E+03 | 3.29E+03 |
| L4 | 1.69E+03 | 3.22E+03 | 1.89E+03 | 2.98E+03 |
| NF | — | — | — | — |
| NS | -265. | 2.63E+03 | -200. | 2.50E+03 |




Data identically zero, insufficient, or not available from NFA.

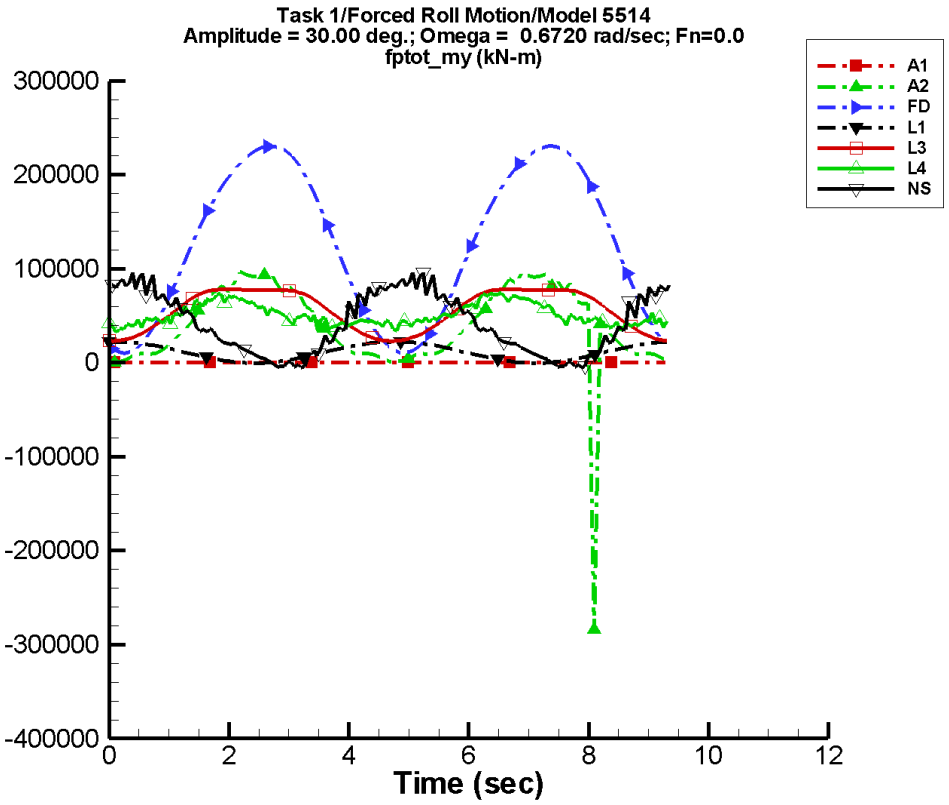
Figure D–162. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–323. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.98E-02 | 8.45 | -116 | 5.23E-02 | 134 |
| A2 | 8.29E+03 | 65.7 | -45 | 4.29E+03 | -96 |
| FD | 4.54E+04 | 7.76 | 164 | 3.03E+04 | -109 |
| L1 | 2.75E+03 | 0.243 | -128 | 2.84E+03 | 83 |
| L3 | 1.58E+04 | 4.57 | -178 | 9.58E+03 | -94 |
| L4 | 1.50E+04 | 613. | -151 | 5.46E+03 | -68 |
| NF | — | — | — | — | — |
| NS | 9.37E+03 | 29.7 | -175 | 1.20E+04 | 65 |

Table D–324. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -10.6 | 11.2 | -8.87 | 8.56 |
| A2 | 716. | 1.26E+04 | 1.17E+03 | 1.23E+04 |
| FD | 1.52E+04 | 7.57E+04 | 1.55E+04 | 7.55E+04 |
| L1 | -90.8 | 5.60E+03 | -43.7 | 5.61E+03 |
| L3 | 6.35E+03 | 2.54E+04 | 6.37E+03 | 2.53E+04 |
| L4 | 8.02E+03 | 2.29E+04 | 9.83E+03 | 2.18E+04 |
| NF | — | — | — | — |
| NS | -3.41E+03 | 2.38E+04 | -2.34E+03 | 2.10E+04 |




Data identically zero, insufficient, or not available from NFA.

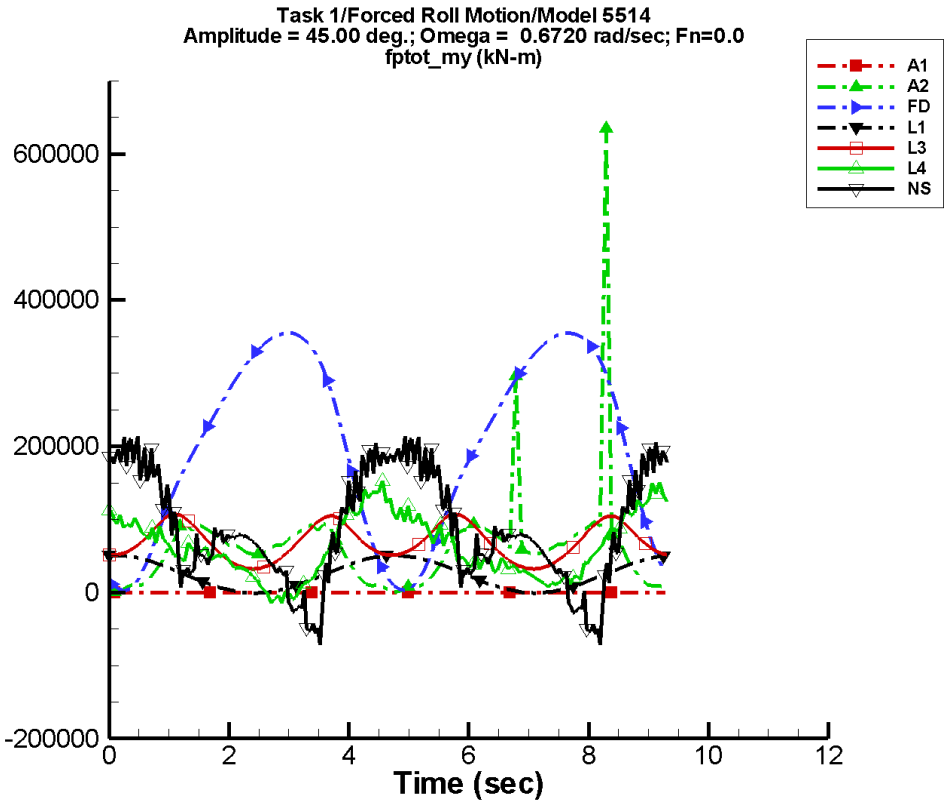
Figure D–163. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–325. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.96E-02 | 16.9 | -116 | 0.105 | 134 |
| A2 | 3.88E+04 | 6.95E+03 | -44 | 4.40E+04 | -90 |
| FD | 1.25E+05 | 501. | -32 | 1.10E+05 | -110 |
| L1 | 1.10E+04 | 1.02 | -83 | 1.14E+04 | 83 |
| L3 | 5.59E+04 | 378. | 0 | 2.94E+04 | -93 |
| L4 | 5.07E+04 | 1.85E+03 | -125 | 1.40E+04 | -64 |
| NF | — | — | — | — | — |
| NS | 4.18E+04 | 123. | -175 | 4.37E+04 | 60 |

Table D–326. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -21.2 | 22.3 | -17.7 | 17.1 |
| A2 | -2.84E+05 | 9.65E+04 | -1.10E+03 | 9.36E+04 |
| FD | 1.04E+04 | 2.30E+05 | 1.17E+04 | 2.28E+05 |
| L1 | -362. | 2.24E+04 | -174. | 2.24E+04 |
| L3 | 2.31E+04 | 7.82E+04 | 2.32E+04 | 7.80E+04 |
| L4 | 3.27E+04 | 7.41E+04 | 3.55E+04 | 7.14E+04 |
| NF | — | — | — | — |
| NS | -5.07E+03 | 9.63E+04 | -2.76E+03 | 8.74E+04 |




Data identically zero, insufficient, or not available from NFA.

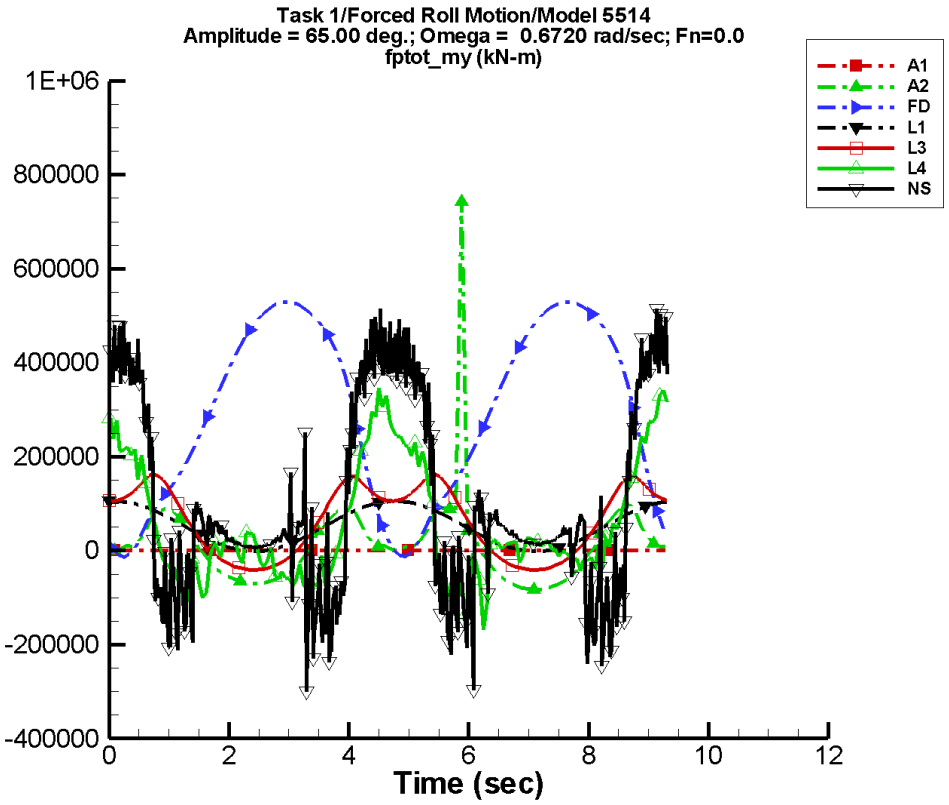
Figure D–164. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–327. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.94E-02 | 25.4 | -116 | 0.157 | 134 |
| A2 | 6.23E+04 | 1.26E+04 | 140 | 3.93E+04 | -107 |
| FD | 1.98E+05 | 2.28E+03 | -33 | 1.67E+05 | -119 |
| L1 | 2.48E+04 | 2.58 | -72 | 2.56E+04 | 83 |
| L3 | 6.97E+04 | 2.14E+03 | 0 | 1.09E+04 | 64 |
| L4 | 6.18E+04 | 3.56E+03 | 170 | 5.05E+04 | 86 |
| NF | — | — | — | — | — |
| NS | 8.87E+04 | 134. | -150 | 8.34E+04 | 63 |

Table D–328. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -31.9 | 33.5 | -26.6 | 25.7 |
| A2 | 702. | 6.35E+05 | 903. | 1.55E+05 |
| FD | 2.35E+03 | 3.55E+05 | 6.15E+03 | 3.50E+05 |
| L1 | -814. | 5.04E+04 | -391. | 5.04E+04 |
| L3 | 3.21E+04 | 1.07E+05 | 3.34E+04 | 1.03E+05 |
| L4 | -1.46E+04 | 1.53E+05 | -6.30E+03 | 1.32E+05 |
| NF | — | — | — | — |
| NS | -7.26E+04 | 2.15E+05 | -4.52E+04 | 1.96E+05 |




Data identically zero, insufficient, or not available from NFA.

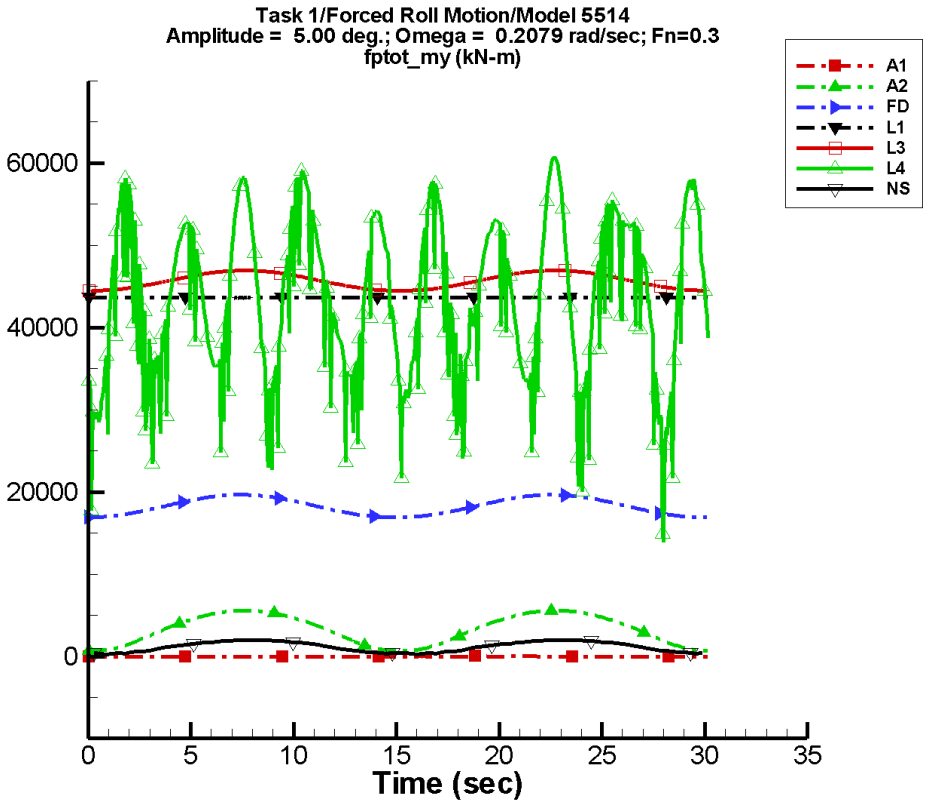
Figure D–165. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–329. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.129 | 36.6 | -116 | 0.227 | 134 |
| A2 | 1.38E+04 | 1.26E+04 | -113 | 5.79E+04 | 64 |
| FD | 2.88E+05 | 2.65E+03 | -43 | 2.59E+05 | -128 |
| L1 | 5.17E+04 | 5.90 | -66 | 5.34E+04 | 83 |
| L3 | 6.31E+04 | 1.75E+03 | -5 | 9.38E+04 | 82 |
| L4 | 5.07E+04 | 1.90E+04 | 148 | 1.36E+05 | 100 |
| NF | — | — | — | — | — |
| NS | 9.89E+04 | 783. | -117 | 1.77E+05 | 86 |

Table D–330. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -46.0 | 48.4 | -38.4 | 37.1 |
| A2 | -8.32E+04 | 7.43E+05 | -8.20E+04 | 1.50E+05 |
| FD | -1.31E+04 | 5.29E+05 | -2.35E+03 | 5.21E+05 |
| L1 | -1.70E+03 | 1.05E+05 | -816. | 1.05E+05 |
| L3 | -4.10E+04 | 1.63E+05 | -3.97E+04 | 1.53E+05 |
| L4 | -1.67E+05 | 3.46E+05 | -9.53E+04 | 2.93E+05 |
| NF | — | — | — | — |
| NS | -3.08E+05 | 5.18E+05 | -1.41E+05 | 4.44E+05 |




Data identically zero, insufficient, or not available from NFA.

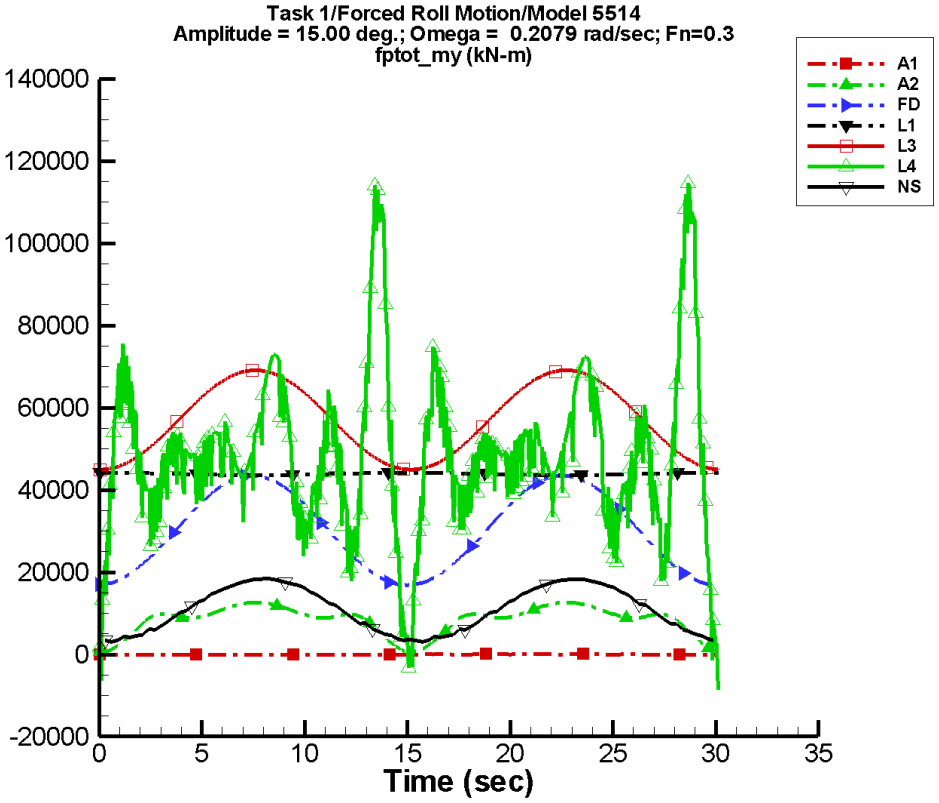
Figure D–166. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–331. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.91E-03 | 2.20 | -157 | 1.68E-02 | 86 |
| A2 | 3.26E+03 | 0.681 | -60 | 2.47E+03 | -92 |
| FD | 1.82E+04 | 0.738 | -176 | 1.38E+03 | -87 |
| L1 | 4.36E+04 | 4.27 | -158 | 30.1 | 88 |
| L3 | 4.57E+04 | 3.71 | -178 | 1.25E+03 | -91 |
| L4 | 4.33E+04 | 51.1 | -105 | 2.15E+03 | -97 |
| NF | — | — | — | — | — |
| NS | 1.16E+03 | 0.978 | 101 | 851. | -99 |

Table D–332. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.14 | 4.08 | -3.10 | 3.06 |
| A2 | 724. | 5.59E+03 | 710. | 5.58E+03 |
| FD | 1.69E+04 | 1.97E+04 | 1.69E+04 | 1.96E+04 |
| L1 | 4.36E+04 | 4.37E+04 | 4.36E+04 | 4.37E+04 |
| L3 | 4.44E+04 | 4.69E+04 | 4.44E+04 | 4.69E+04 |
| L4 | 1.39E+04 | 6.08E+04 | 2.44E+04 | 6.00E+04 |
| NF | — | — | — | — |
| NS | 228. | 1.97E+03 | 341. | 1.95E+03 |




Data identically zero, insufficient, or not available from NFA.

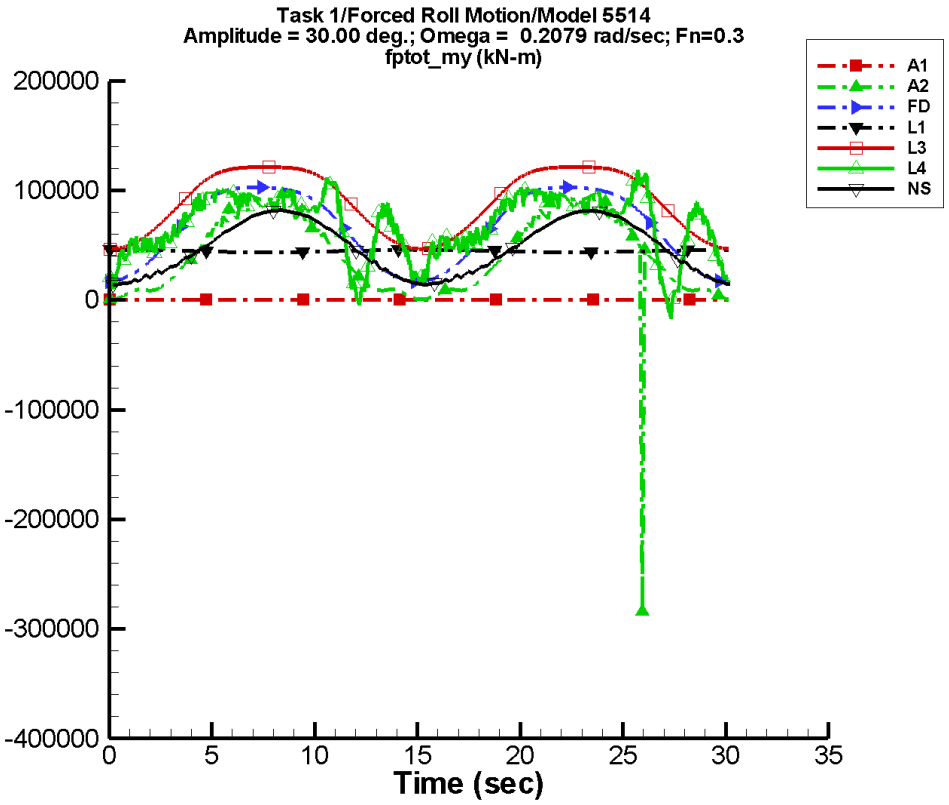
Figure D–167. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–333. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.97E-02 | 6.59 | -157 | 5.05E-02 | 86 |
| A2 | 8.28E+03 | 31.1 | -57 | 4.25E+03 | -91 |
| FD | 3.00E+04 | 3.67 | -179 | 1.34E+04 | -87 |
| L1 | 4.39E+04 | 4.36 | -158 | 290. | 88 |
| L3 | 5.69E+04 | 8.06 | 142 | 1.21E+04 | -91 |
| L4 | 4.84E+04 | 335. | -127 | 2.58E+03 | -120 |
| NF | — | — | — | — | — |
| NS | 1.07E+04 | 20.7 | 21 | 7.52E+03 | -101 |

Table D–334. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -12.4 | 12.2 | -9.31 | 9.17 |
| A2 | 723. | 1.27E+04 | 704. | 1.26E+04 |
| FD | 1.69E+04 | 4.35E+04 | 1.69E+04 | 4.34E+04 |
| L1 | 4.36E+04 | 4.42E+04 | 4.36E+04 | 4.42E+04 |
| L3 | 4.49E+04 | 6.91E+04 | 4.50E+04 | 6.91E+04 |
| L4 | -8.51E+03 | 1.15E+05 | -922. | 1.08E+05 |
| NF | — | — | — | — |
| NS | 2.91E+03 | 1.84E+04 | 3.47E+03 | 1.80E+04 |




Data identically zero, insufficient, or not available from NFA.

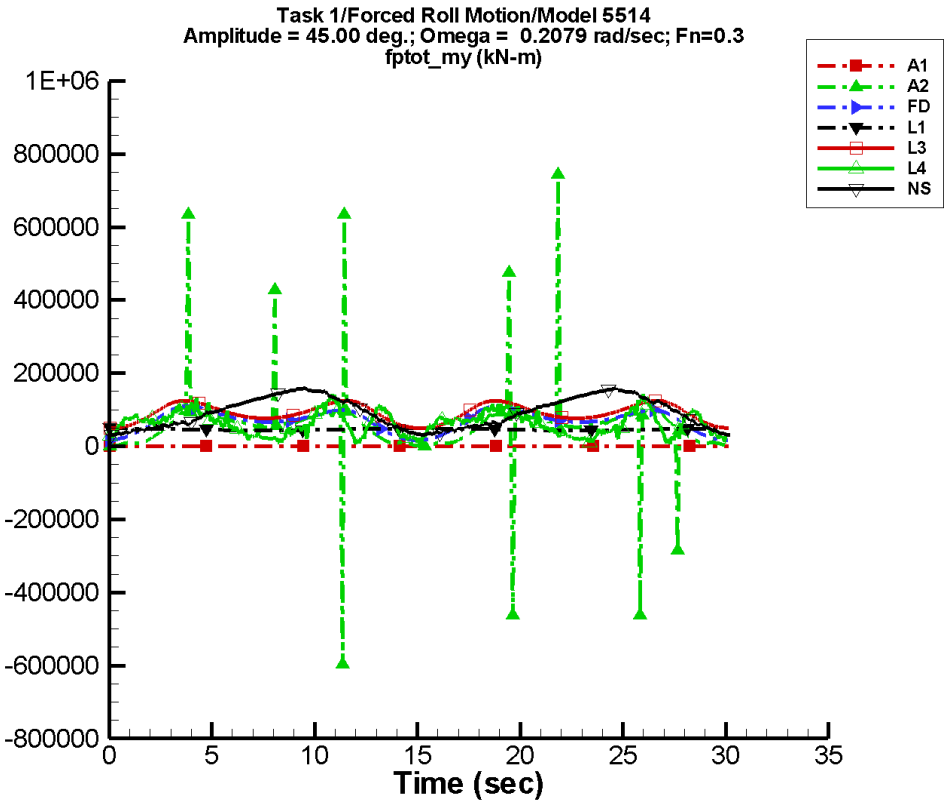
Figure D–168. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–335. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.95E-02 | 13.2 | -157 | 0.101 | 86 |
| A2 | 4.11E+04 | 2.01E+03 | -45 | 4.51E+04 | -90 |
| FD | 6.51E+04 | 141. | 13 | 4.50E+04 | -86 |
| L1 | 4.48E+04 | 4.49 | -159 | 1.17E+03 | 88 |
| L3 | 8.96E+04 | 331. | -59 | 3.88E+04 | -91 |
| L4 | 6.86E+04 | 437. | -108 | 3.05E+04 | -79 |
| NF | — | — | — | — | — |
| NS | 4.71E+04 | 76.0 | 34 | 3.30E+04 | -106 |

Table D–336. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -24.8 | 24.5 | -18.6 | 18.3 |
| A2 | -2.84E+05 | 9.66E+04 | 609. | 9.33E+04 |
| FD | 1.68E+04 | 1.03E+05 | 1.69E+04 | 1.03E+05 |
| L1 | 4.36E+04 | 4.60E+04 | 4.36E+04 | 4.59E+04 |
| L3 | 4.67E+04 | 1.21E+05 | 4.68E+04 | 1.21E+05 |
| L4 | -1.82E+04 | 1.22E+05 | -6.77E+03 | 1.17E+05 |
| NF | — | — | — | — |
| NS | 1.36E+04 | 8.20E+04 | 1.44E+04 | 8.12E+04 |




Data identically zero, insufficient, or not available from NFA.

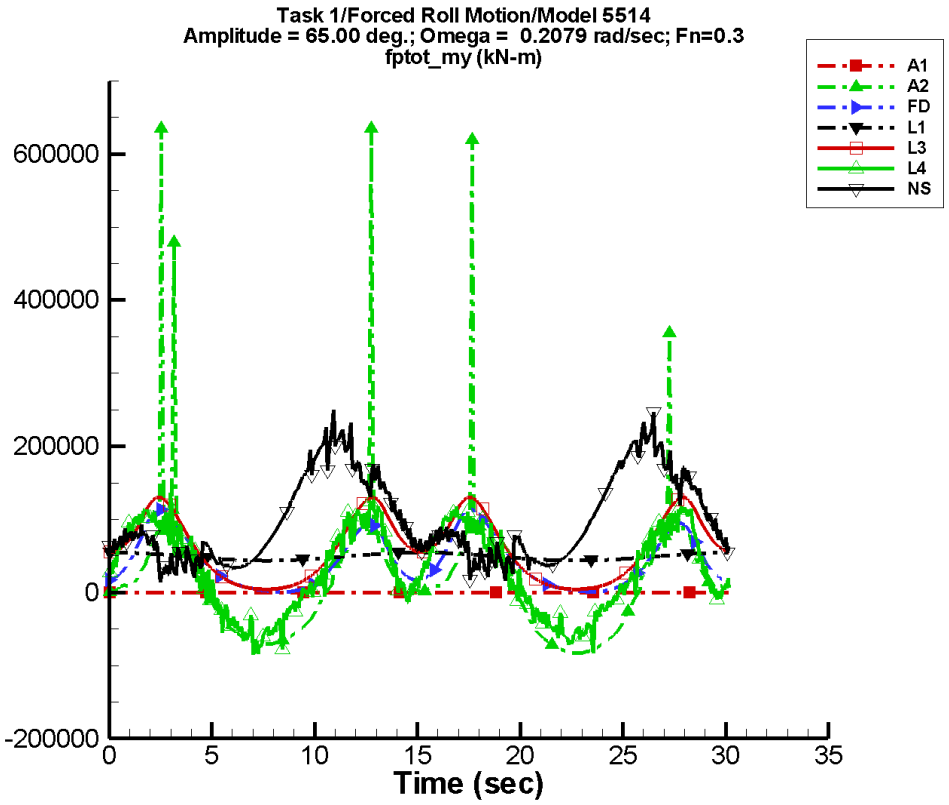
Figure D–169. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–337. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.92E-02 | 19.8 | -157 | 0.151 | 86 |
| A2 | 5.33E+04 | 4.03E+03 | -38 | 3.73E+04 | -76 |
| FD | 6.95E+04 | 631. | 6 | 2.39E+04 | -71 |
| L1 | 4.63E+04 | 4.58 | -159 | 2.63E+03 | 88 |
| L3 | 9.15E+04 | 2.34E+03 | -61 | 8.41E+03 | -92 |
| L4 | 6.30E+04 | 2.17E+03 | -41 | 1.12E+04 | 50 |
| NF | — | — | — | — | — |
| NS | 9.15E+04 | 233. | 31 | 5.69E+04 | -120 |

Table D–338. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -37.2 | 36.7 | -27.9 | 27.5 |
| A2 | -5.97E+05 | 7.43E+05 | 727. | 1.64E+05 |
| FD | 1.68E+04 | 1.09E+05 | 1.72E+04 | 1.08E+05 |
| L1 | 4.36E+04 | 4.89E+04 | 4.36E+04 | 4.89E+04 |
| L3 | 4.96E+04 | 1.25E+05 | 4.98E+04 | 1.24E+05 |
| L4 | 2.96E+03 | 1.48E+05 | 1.69E+04 | 1.29E+05 |
| NF | — | — | — | — |
| NS | 2.96E+04 | 1.60E+05 | 3.12E+04 | 1.55E+05 |




Data identically zero, insufficient, or not available from NFA.

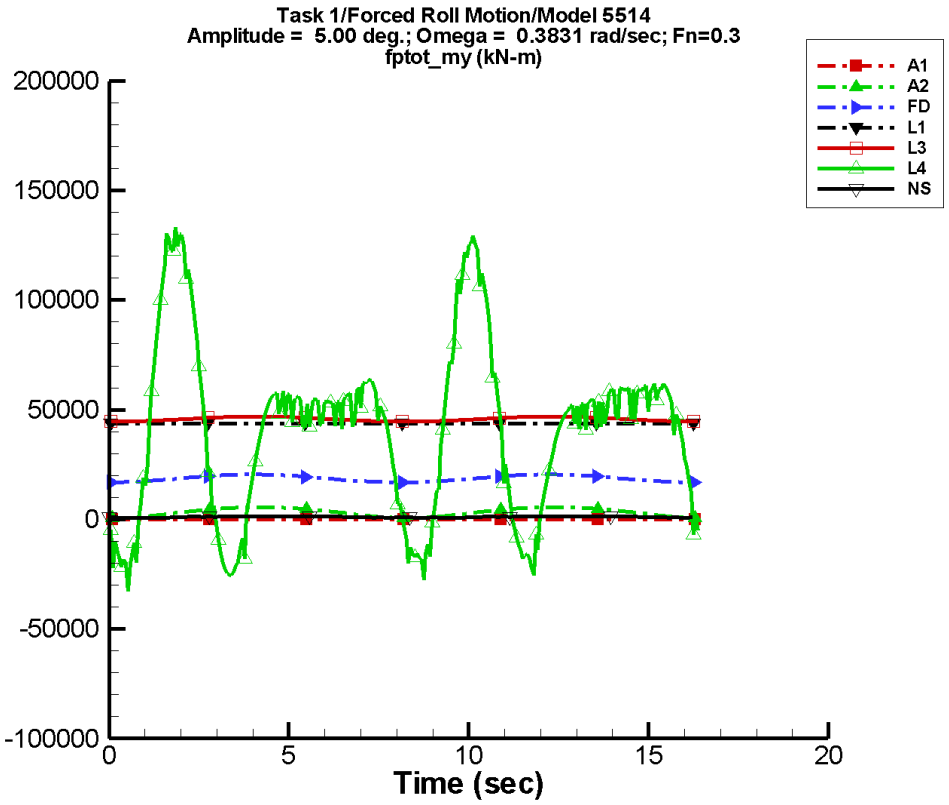
Figure D–170. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–339. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.129 | 28.5 | -157 | 0.219 | 86 |
| A2 | 1.17E+04 | 5.86E+03 | -24 | 6.16E+04 | 83 |
| FD | 4.21E+04 | 525. | -8 | 3.16E+04 | 66 |
| L1 | 4.91E+04 | 4.61 | -159 | 5.49E+03 | 88 |
| L3 | 6.13E+04 | 2.96E+03 | -64 | 5.03E+04 | 88 |
| L4 | 3.25E+04 | 3.38E+03 | -39 | 6.70E+04 | 94 |
| NF | — | — | — | — | — |
| NS | 9.77E+04 | 1.94E+03 | -174 | 7.42E+04 | 177 |

Table D–340. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -53.8 | 53.0 | -40.3 | 39.8 |
| A2 | -8.32E+04 | 6.35E+05 | -8.28E+04 | 1.77E+05 |
| FD | 827. | 1.13E+05 | 975. | 1.11E+05 |
| L1 | 4.36E+04 | 5.46E+04 | 4.36E+04 | 5.46E+04 |
| L3 | 4.28E+03 | 1.30E+05 | 4.32E+03 | 1.29E+05 |
| L4 | -8.49E+04 | 1.36E+05 | -7.21E+04 | 1.17E+05 |
| NF | — | — | — | — |
| NS | 1.25E+04 | 2.49E+05 | 2.98E+04 | 2.18E+05 |




Data identically zero, insufficient, or not available from NFA.

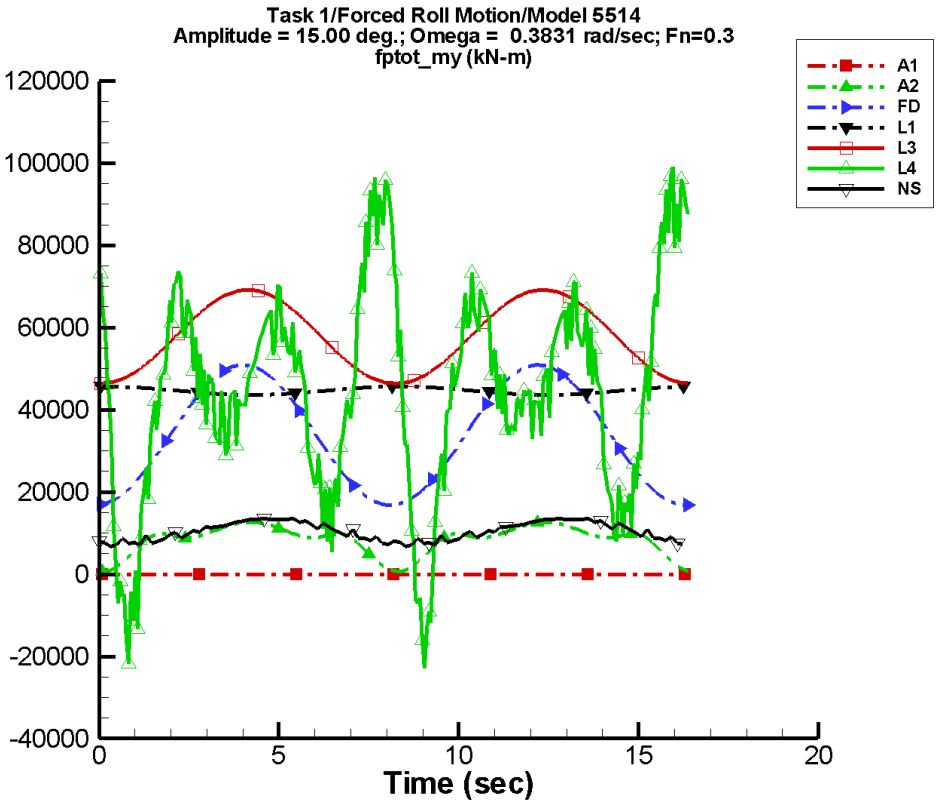
Figure D–171. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–341. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.21E-02 | 1.85 | -161 | 0.145 | 166 |
| A2 | 3.26E+03 | 0.479 | -143 | 2.47E+03 | -94 |
| FD | 1.87E+04 | 1.33 | 121 | 1.80E+03 | -86 |
| L1 | 4.37E+04 | 1.19 | 107 | 113. | 83 |
| L3 | 4.57E+04 | 2.13 | 149 | 1.16E+03 | -92 |
| L4 | 4.17E+04 | 3.93E+03 | -7 | 8.54E+03 | -29 |
| NF | — | — | — | — | — |
| NS | 1.12E+03 | 1.64 | -30 | 367. | -111 |

Table D–342. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.00 | 1.98 | -1.91 | 1.88 |
| A2 | 724. | 5.59E+03 | 702. | 5.57E+03 |
| FD | 1.69E+04 | 2.05E+04 | 1.69E+04 | 2.05E+04 |
| L1 | 4.36E+04 | 4.38E+04 | 4.36E+04 | 4.38E+04 |
| L3 | 4.46E+04 | 4.69E+04 | 4.46E+04 | 4.69E+04 |
| L4 | -3.67E+04 | 1.47E+05 | -2.83E+04 | 1.35E+05 |
| NF | — | — | — | — |
| NS | 563. | 1.48E+03 | 729. | 1.45E+03 |




Data identically zero, insufficient, or not available from NFA.

Figure D–172. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–343. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.62E-02 | 5.54 | -161 | 0.435 | 166 |
| A2 | 8.28E+03 | 33.1 | -56 | 4.25E+03 | -93 |
| FD | 3.37E+04 | 7.53 | 119 | 1.71E+04 | -86 |
| L1 | 4.46E+04 | 1.14 | 107 | 1.01E+03 | 83 |
| L3 | 5.77E+04 | 6.61 | 159 | 1.14E+04 | -92 |
| L4 | 4.42E+04 | 2.53E+03 | -97 | 6.08E+03 | -129 |
| NF | — | — | — | — | — |
| NS | 1.04E+04 | 22.1 | -25 | 2.97E+03 | -115 |

Table D–344. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.99 | 5.93 | -5.73 | 5.63 |
| A2 | 722. | 1.27E+04 | 822. | 1.26E+04 |
| FD | 1.68E+04 | 5.09E+04 | 1.71E+04 | 5.06E+04 |
| L1 | 4.36E+04 | 4.56E+04 | 4.36E+04 | 4.56E+04 |
| L3 | 4.64E+04 | 6.91E+04 | 4.64E+04 | 6.91E+04 |
| L4 | -2.29E+04 | 9.90E+04 | -1.06E+04 | 9.04E+04 |
| NF | — | — | — | — |
| NS | 6.71E+03 | 1.36E+04 | 7.50E+03 | 1.33E+04 |

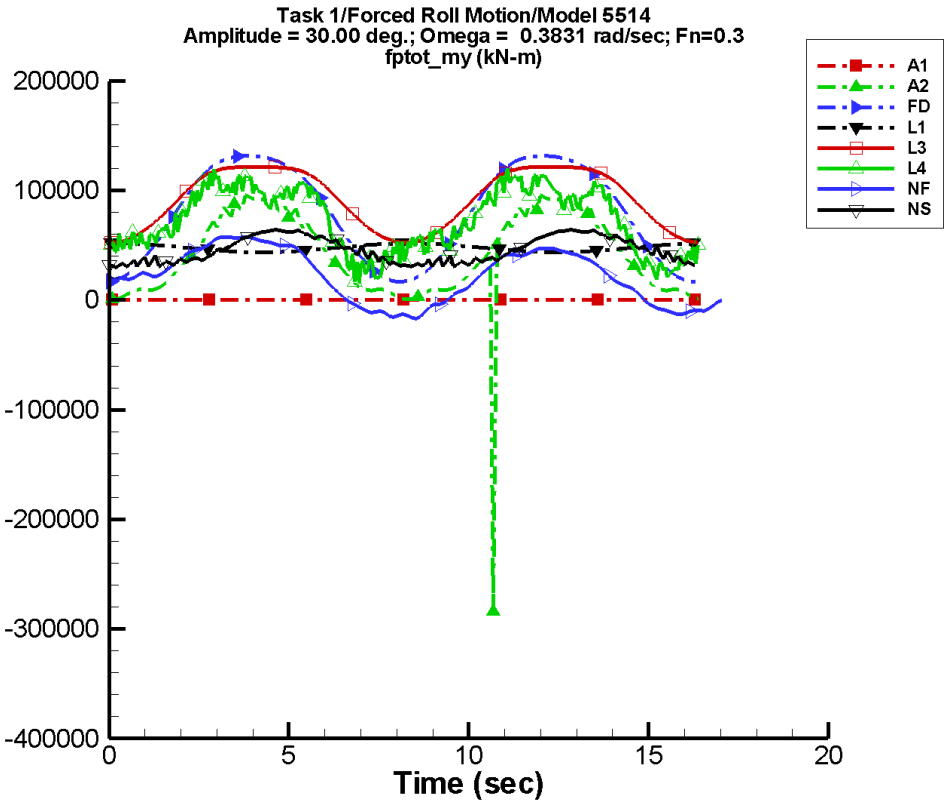



Figure D–173. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–345. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.192 | 11.1 | -161 | 0.871 | 166 |
| A2 | 4.05E+04 | 4.28E+03 | 35 | 4.53E+04 | -100 |
| FD | 7.96E+04 | 305. | -58 | 5.89E+04 | -85 |
| L1 | 4.77E+04 | 1.07 | 112 | 4.05E+03 | 83 |
| L3 | 9.24E+04 | 183. | -36 | 3.65E+04 | -92 |
| L4 | 7.29E+04 | 577. | -43 | 3.62E+04 | -74 |
| NF | 2.13E+04 | 8.47E+03 | 62 | 3.17E+04 | -1 |
| NS | 4.54E+04 | 150. | -18 | 1.55E+04 | -126 |

Table D–346. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -18.0 | 11.9 | -11.5 | 11.3 |
| A2 | -2.84E+05 | 9.58E+04 | 1.07E+03 | 9.23E+04 |
| FD | 1.67E+04 | 1.32E+05 | 1.76E+04 | 1.31E+05 |
| L1 | 4.36E+04 | 5.17E+04 | 4.37E+04 | 5.17E+04 |
| L3 | 5.25E+04 | 1.21E+05 | 5.24E+04 | 1.21E+05 |
| L4 | 1.56E+04 | 1.20E+05 | 2.66E+04 | 1.11E+05 |
| NF | -1.71E+04 | 5.77E+04 | -1.44E+04 | 5.70E+04 |
| NS | 2.99E+04 | 6.41E+04 | 3.14E+04 | 6.33E+04 |

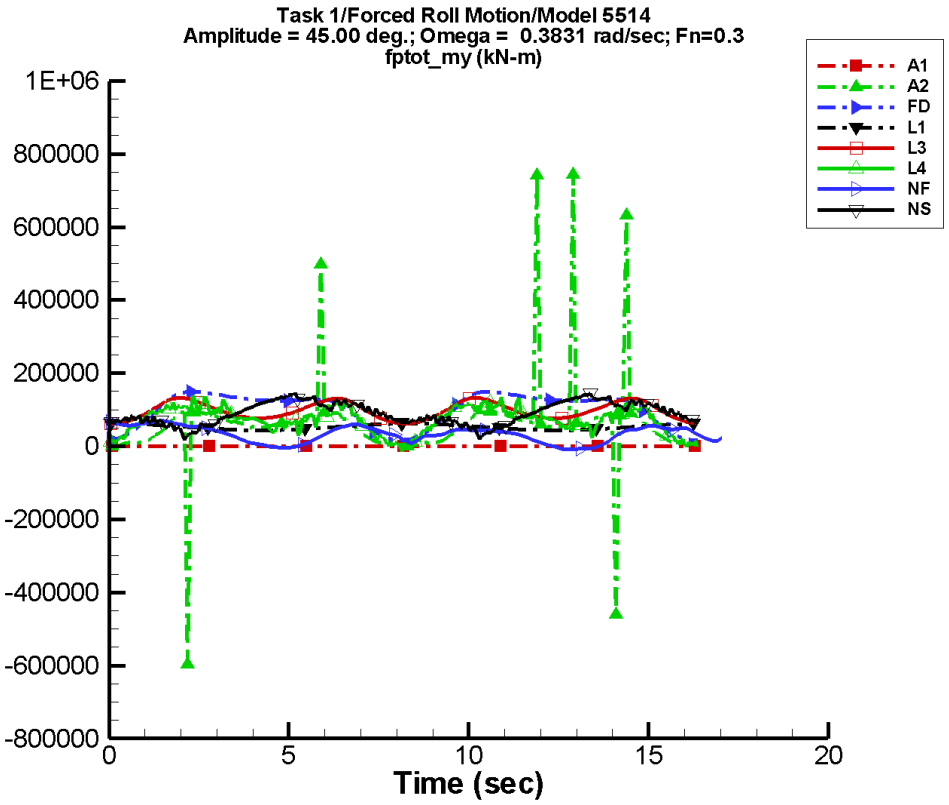



Figure D–174. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–347. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.289 | 16.6 | -161 | 1.31 | 166 |
| A2 | 6.21E+04 | 1.57E+04 | -166 | 4.45E+04 | -102 |
| FD | 1.01E+05 | 1.48E+03 | -60 | 5.17E+04 | -77 |
| L1 | 5.28E+04 | 0.944 | 114 | 9.12E+03 | 83 |
| L3 | 9.74E+04 | 1.49E+03 | -12 | 6.57E+03 | -67 |
| L4 | 7.26E+04 | 1.75E+03 | 20 | 2.60E+04 | -52 |
| NF | 3.22E+04 | 8.38E+03 | 87 | 1.82E+04 | 132 |
| NS | 8.92E+04 | 524. | -12 | 3.81E+04 | -156 |

Table D–348. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -27.0 | 17.8 | -17.2 | 16.9 |
| A2 | -5.97E+05 | 7.43E+05 | -1.12E+03 | 1.50E+05 |
| FD | 1.64E+04 | 1.49E+05 | 1.87E+04 | 1.48E+05 |
| L1 | 4.37E+04 | 6.19E+04 | 4.37E+04 | 6.19E+04 |
| L3 | 6.26E+04 | 1.32E+05 | 6.27E+04 | 1.31E+05 |
| L4 | -1.42E+04 | 1.38E+05 | 3.45E+03 | 1.12E+05 |
| NF | -8.68E+03 | 7.06E+04 | -7.07E+03 | 6.58E+04 |
| NS | 1.60E+04 | 1.46E+05 | 3.37E+04 | 1.37E+05 |

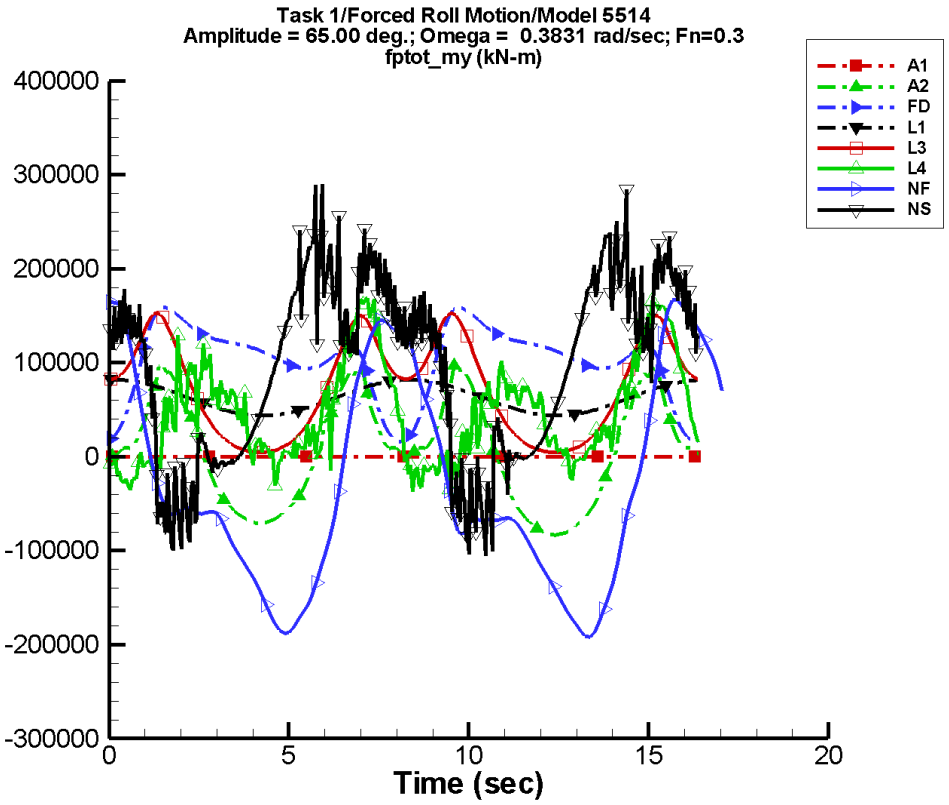


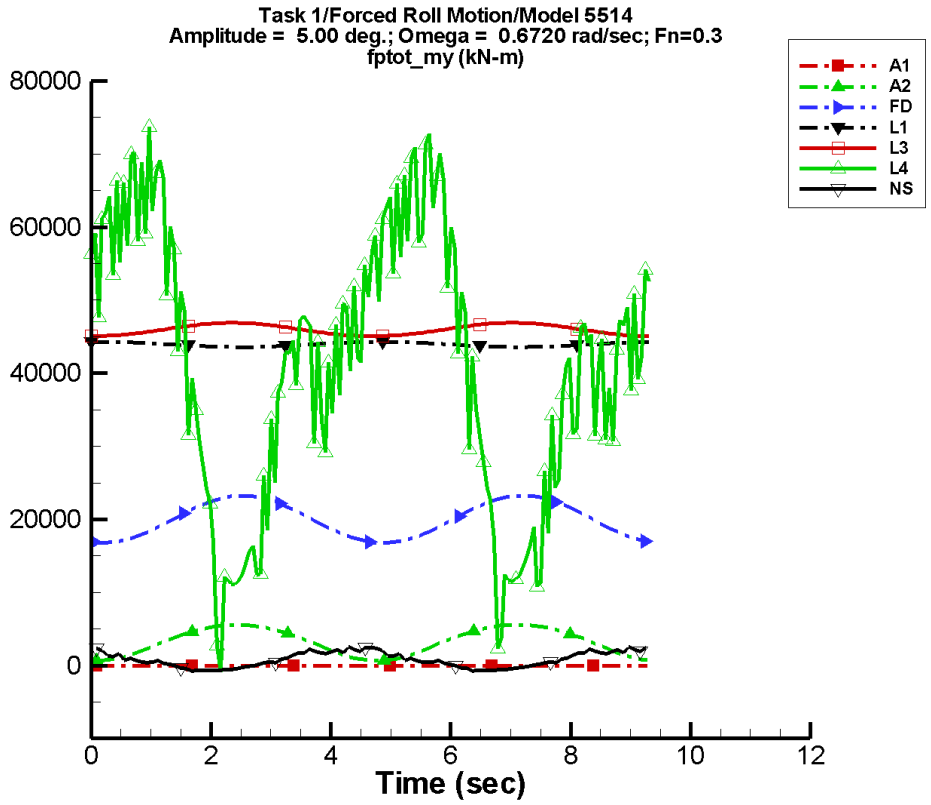

Figure D–175. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–349. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.417 | 24.0 | -161 | 1.89 | 166 |
| A2 | 5.62E+03 | 4.57E+03 | -8 | 5.64E+04 | 82 |
| FD | 1.02E+05 | 784. | -58 | 3.40E+04 | -48 |
| L1 | 6.28E+04 | 0.825 | 116 | 1.90E+04 | 83 |
| L3 | 7.42E+04 | 1.93E+03 | -1 | 5.93E+04 | 83 |
| L4 | 4.44E+04 | 2.06E+03 | -65 | 2.04E+04 | 170 |
| NF | -3.32E+04 | 1.23E+04 | 130 | 1.32E+05 | 164 |
| NS | 9.20E+04 | 1.23E+03 | -135 | 1.18E+05 | 158 |

Table D–350. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -39.0 | 25.7 | -24.8 | 24.4 |
| A2 | -8.32E+04 | 9.87E+04 | -8.17E+04 | 8.42E+04 |
| FD | 1.60E+04 | 1.59E+05 | 2.05E+04 | 1.55E+05 |
| L1 | 4.37E+04 | 8.18E+04 | 4.39E+04 | 8.18E+04 |
| L3 | 4.42E+03 | 1.53E+05 | 4.67E+03 | 1.49E+05 |
| L4 | -3.73E+04 | 1.69E+05 | -2.52E+04 | 1.61E+05 |
| NF | -1.92E+05 | 1.67E+05 | -1.81E+05 | 1.62E+05 |
| NS | -1.10E+05 | 2.92E+05 | -6.38E+04 | 2.20E+05 |




Data identically zero, insufficient, or not available from NFA.

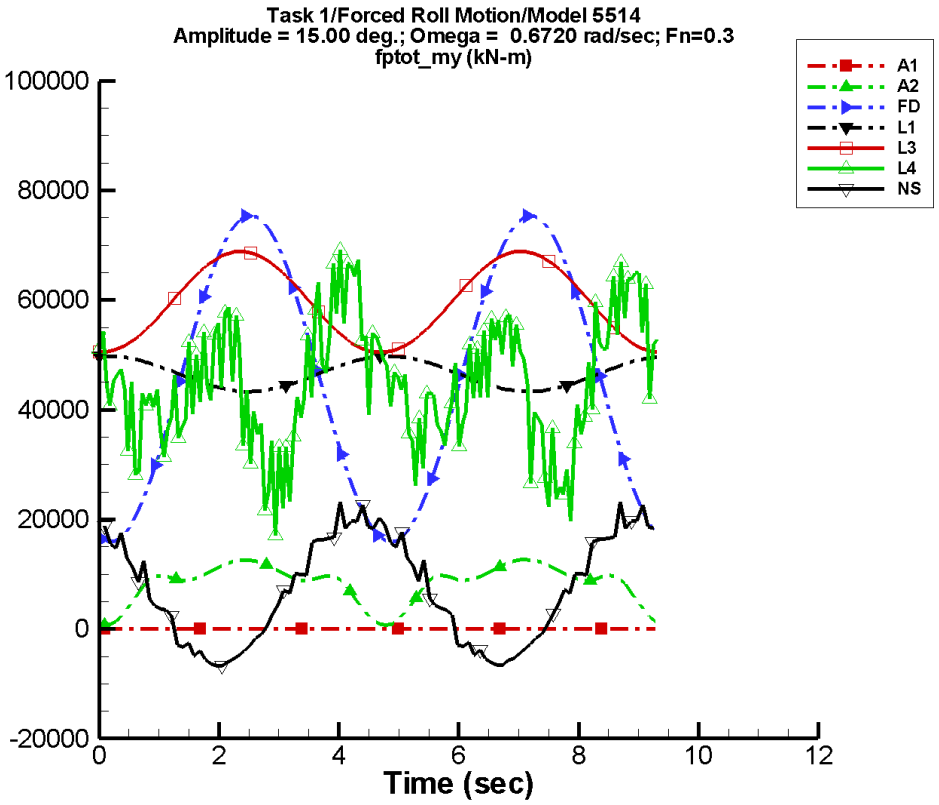
Figure D–176. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–351. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.01E-03 | 3.49 | 142 | 1.25E-02 | 39 |
| A2 | 3.26E+03 | 7.57 | 14 | 2.47E+03 | -97 |
| FD | 2.00E+04 | 2.18 | 150 | 3.23E+03 | -105 |
| L1 | 4.39E+04 | 1.07 | 162 | 358. | 78 |
| L3 | 4.60E+04 | 2.67 | 178 | 920. | -92 |
| L4 | 4.13E+04 | 868. | -7 | 2.25E+04 | 58 |
| NF | — | — | — | — | — |
| NS | 791. | 2.34 | -96 | 1.42E+03 | 118 |

Table D–352. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.37 | 3.33 | -3.33 | 3.26 |
| A2 | 722. | 5.59E+03 | 718. | 5.50E+03 |
| FD | 1.68E+04 | 2.32E+04 | 1.68E+04 | 2.32E+04 |
| L1 | 4.36E+04 | 4.43E+04 | 4.36E+04 | 4.43E+04 |
| L3 | 4.50E+04 | 4.69E+04 | 4.51E+04 | 4.69E+04 |
| L4 | -869. | 7.37E+04 | 1.00E+04 | 6.65E+04 |
| NF | — | — | — | — |
| NS | -750. | 2.55E+03 | -655. | 2.24E+03 |




Data identically zero, insufficient, or not available from NFA.

Figure D–177. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–353. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.70E-02 | 10.5 | 142 | 3.76E-02 | 39 |
| A2 | 8.29E+03 | 53.0 | -38 | 4.29E+03 | -96 |
| FD | 4.56E+04 | 7.70 | 161 | 2.98E+04 | -105 |
| L1 | 4.65E+04 | 1.51 | 179 | 3.22E+03 | 78 |
| L3 | 5.96E+04 | 5.79 | 176 | 9.24E+03 | -92 |
| L4 | 4.43E+04 | 1.21E+03 | -122 | 5.13E+03 | 121 |
| NF | — | — | — | — | — |
| NS | 7.15E+03 | 19.5 | -87 | 1.33E+04 | 116 |

Table D–354. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -10.1 | 9.98 | -9.99 | 9.79 |
| A2 | 719. | 1.27E+04 | 1.18E+03 | 1.23E+04 |
| FD | 1.59E+04 | 7.54E+04 | 1.60E+04 | 7.54E+04 |
| L1 | 4.33E+04 | 4.98E+04 | 4.34E+04 | 4.98E+04 |
| L3 | 5.05E+04 | 6.88E+04 | 5.05E+04 | 6.87E+04 |
| L4 | 1.71E+04 | 6.91E+04 | 2.74E+04 | 6.23E+04 |
| NF | — | — | — | — |
| NS | -6.77E+03 | 2.32E+04 | -5.81E+03 | 1.99E+04 |

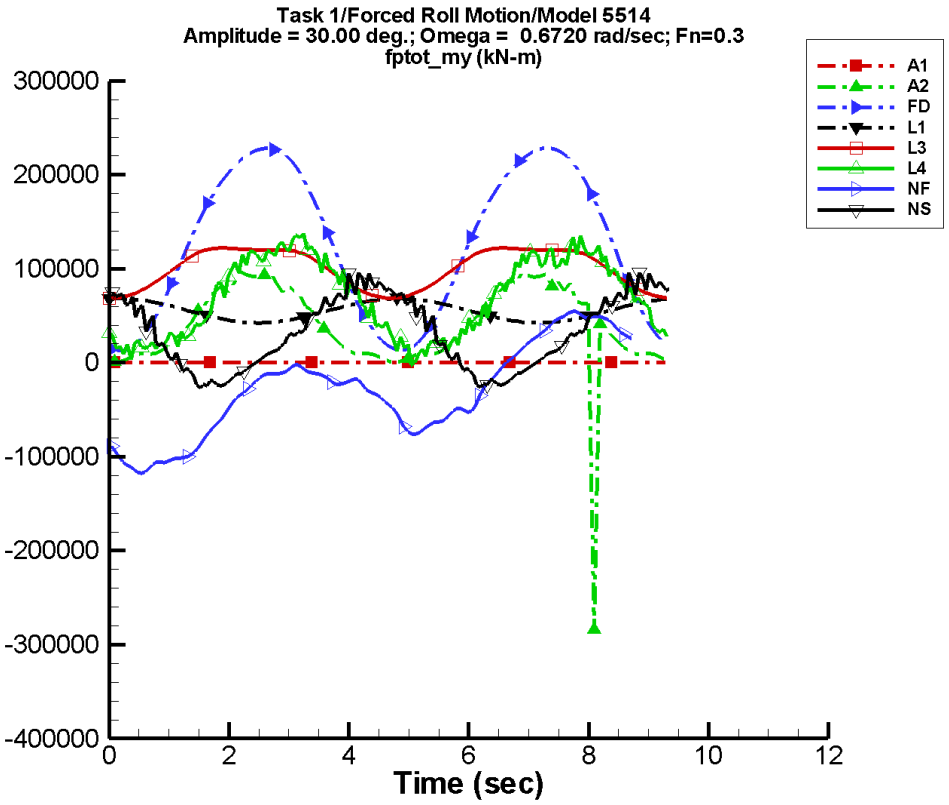



Figure D–178. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–355. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.40E-02 | 20.9 | 142 | 7.52E-02 | 39 |
| A2 | 3.88E+04 | 6.92E+03 | -44 | 4.40E+04 | -90 |
| FD | 1.25E+05 | 500. | -31 | 1.08E+05 | -105 |
| L1 | 5.53E+04 | 2.30 | -160 | 1.29E+04 | 78 |
| L3 | 1.00E+05 | 376. | 0 | 2.80E+04 | -90 |
| L4 | 6.90E+04 | 1.97E+03 | -59 | 5.68E+04 | -137 |
| NF | 2.31E+04 | 1.23E+04 | -65 | 4.77E+04 | 118 |
| NS | 3.18E+04 | 125. | -49 | 5.27E+04 | 122 |

Table D–356. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -20.2 | 20.0 | -20.0 | 19.6 |
| A2 | -2.84E+05 | 9.64E+04 | -1.07E+03 | 9.36E+04 |
| FD | 1.29E+04 | 2.28E+05 | 1.35E+04 | 2.28E+05 |
| L1 | 4.24E+04 | 6.82E+04 | 4.26E+04 | 6.82E+04 |
| L3 | 6.88E+04 | 1.22E+05 | 6.90E+04 | 1.22E+05 |
| L4 | -2.77E+03 | 1.38E+05 | 9.97E+03 | 1.29E+05 |
| NF | -7.61E+04 | 8.55E+04 | -7.12E+04 | 8.19E+04 |
| NS | -2.69E+04 | 9.62E+04 | -2.30E+04 | 8.64E+04 |

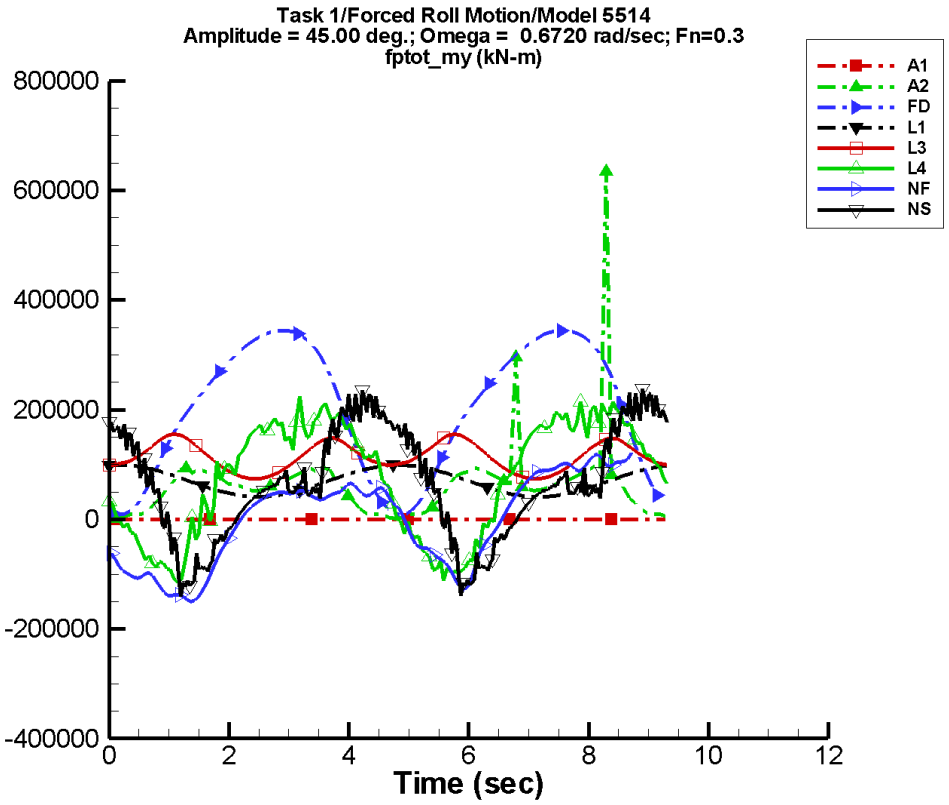



Figure D–179. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–357. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.10E-02 | 31.4 | 142 | 0.113 | 39 |
| A2 | 6.23E+04 | 1.27E+04 | 140 | 3.93E+04 | -107 |
| FD | 1.99E+05 | 2.28E+03 | -32 | 1.61E+05 | -112 |
| L1 | 6.99E+04 | 3.38 | -154 | 2.90E+04 | 78 |
| L3 | 1.15E+05 | 2.14E+03 | 0 | 1.49E+04 | 59 |
| L4 | 7.36E+04 | 1.48E+03 | 87 | 1.43E+05 | -162 |
| NF | 6.03E+04 | 9.23E+03 | -62 | 8.97E+04 | 81 |
| NS | 6.59E+04 | 336. | -33 | 1.25E+05 | 132 |

Table D–358. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -30.3 | 29.9 | -30.0 | 29.4 |
| A2 | 708. | 6.35E+05 | 947. | 1.55E+05 |
| FD | 8.15E+03 | 3.44E+05 | 1.02E+04 | 3.40E+05 |
| L1 | 4.10E+04 | 9.89E+04 | 4.14E+04 | 9.90E+04 |
| L3 | 7.41E+04 | 1.55E+05 | 7.55E+04 | 1.52E+05 |
| L4 | -1.18E+05 | 2.24E+05 | -9.74E+04 | 1.97E+05 |
| NF | -1.29E+05 | 1.69E+05 | -1.07E+05 | 1.58E+05 |
| NS | -1.41E+05 | 2.38E+05 | -1.11E+05 | 2.13E+05 |

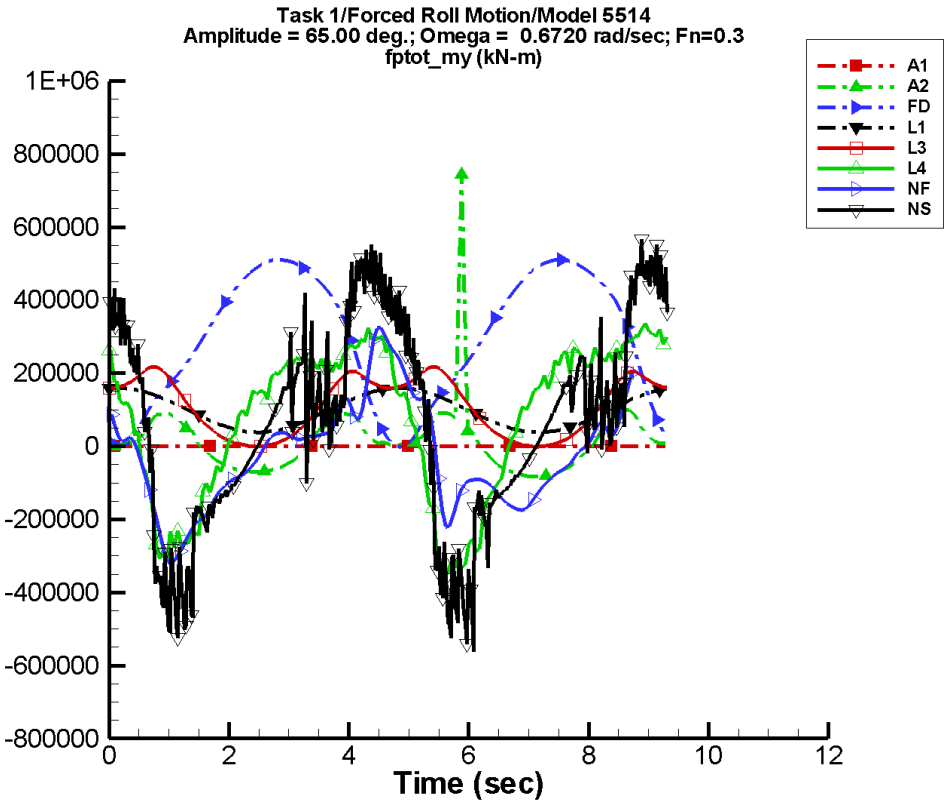


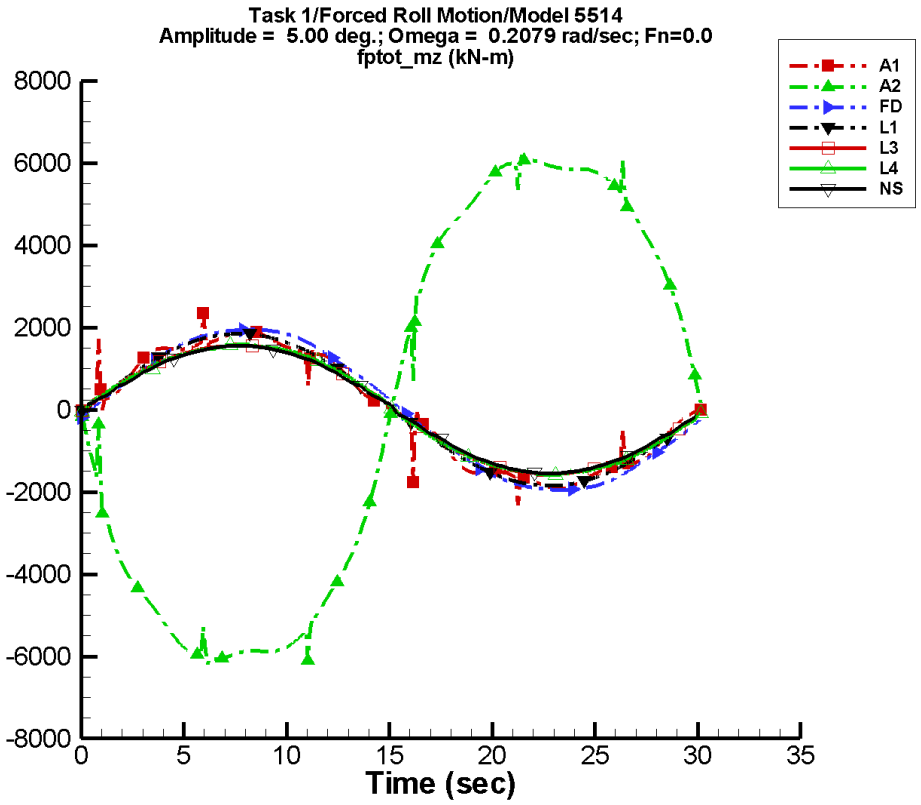

Figure D–180. Time history of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–359. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.117 | 45.3 | 142 | 0.163 | 39 |
| A2 | 1.38E+04 | 1.26E+04 | -113 | 5.79E+04 | 64 |
| FD | 2.91E+05 | 2.61E+03 | -40 | 2.40E+05 | -121 |
| L1 | 9.86E+04 | 4.63 | -151 | 6.05E+04 | 78 |
| L3 | 1.10E+05 | 1.75E+03 | -4 | 1.01E+05 | 79 |
| L4 | 7.38E+04 | 1.19E+04 | 114 | 2.74E+05 | 169 |
| NF | 4.10E+04 | 3.16E+04 | 70 | 1.92E+05 | 6 |
| NS | 6.13E+04 | 1.31E+03 | -121 | 3.09E+05 | 142 |

Table D–360. Minimum and maximum of of $M_y^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -43.8 | 43.3 | -43.3 | 42.4 |
| A2 | -8.32E+04 | 7.43E+05 | -8.20E+04 | 1.50E+05 |
| FD | -1.26E+03 | 5.10E+05 | 6.00E+03 | 5.03E+05 |
| L1 | 3.81E+04 | 1.59E+05 | 3.91E+04 | 1.59E+05 |
| L3 | -1.13E+03 | 2.18E+05 | 332. | 2.08E+05 |
| L4 | -3.47E+05 | 3.36E+05 | -3.27E+05 | 3.14E+05 |
| NF | -2.20E+05 | 4.36E+05 | -1.64E+05 | 3.82E+05 |
| NS | -5.61E+05 | 5.67E+05 | -4.32E+05 | 4.87E+05 |




Data identically zero, insufficient, or not available from NFA.

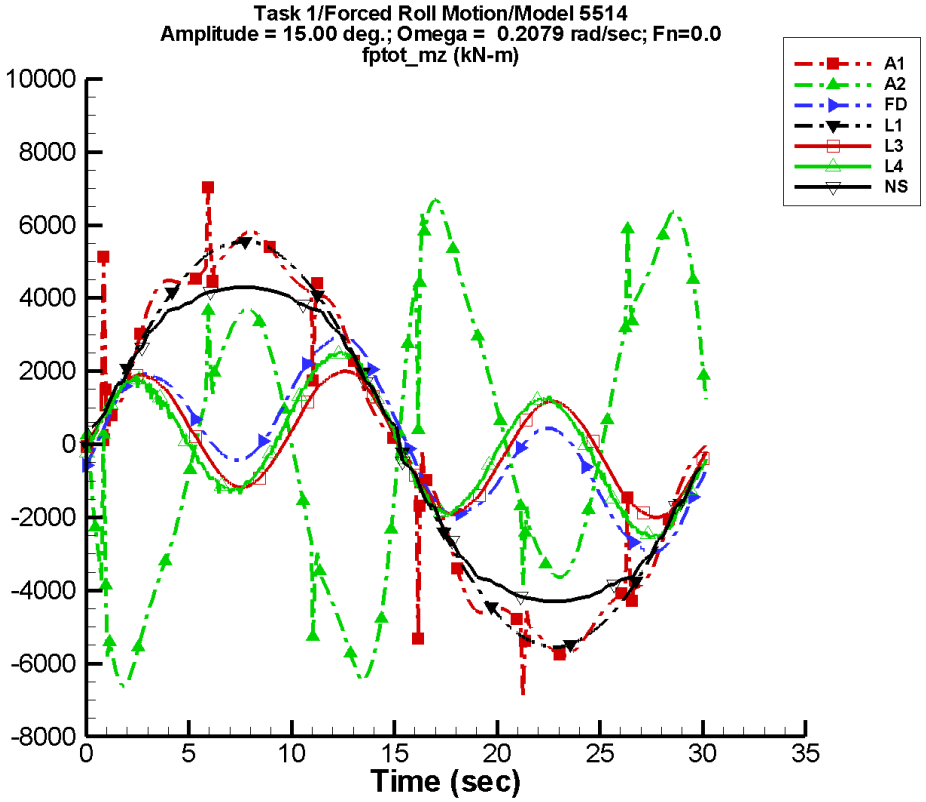
Figure D–181. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–361. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.97 | 1.83E+03 | 0 | 1.84 | 23 |
| A2 | -26.9 | 6.67E+03 | -179 | 131. | -116 |
| FD | 0.157 | 1.98E+03 | -6 | 0.991 | -21 |
| L1 | 7.07E-02 | 1.85E+03 | -1 | 0.154 | 86 |
| L3 | 4.05 | 1.62E+03 | -1 | 15.2 | 87 |
| L4 | 3.57 | 1.62E+03 | -2 | 16.0 | 109 |
| NF | — | — | — | — | — |
| NS | -8.21E-03 | 1.57E+03 | -2 | 4.65E-02 | -28 |

Table D–362. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.32E+03 | 2.34E+03 | -1.92E+03 | 1.93E+03 |
| A2 | -6.20E+03 | 6.20E+03 | -6.07E+03 | 6.06E+03 |
| FD | -1.95E+03 | 1.95E+03 | -1.95E+03 | 1.95E+03 |
| L1 | -1.85E+03 | 1.85E+03 | -1.85E+03 | 1.85E+03 |
| L3 | -1.59E+03 | 1.59E+03 | -1.59E+03 | 1.59E+03 |
| L4 | -1.58E+03 | 1.59E+03 | -1.58E+03 | 1.58E+03 |
| NF | — | — | — | — |
| NS | -1.55E+03 | 1.55E+03 | -1.54E+03 | 1.54E+03 |




Data identically zero, insufficient, or not available from NFA.

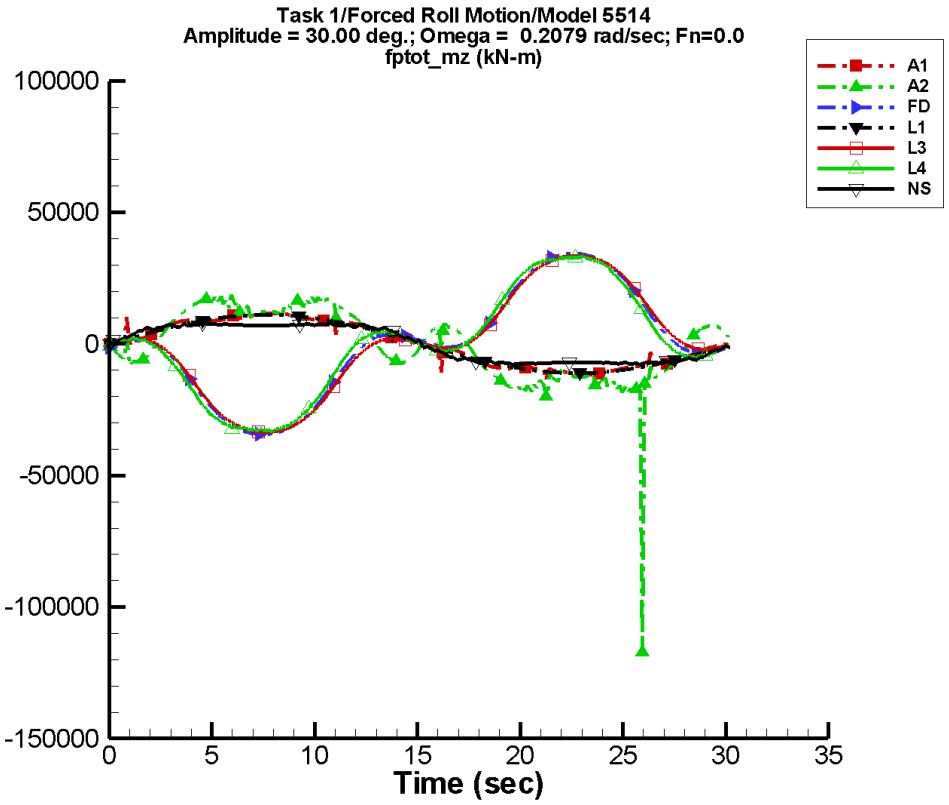
Figure D–182. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–363. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.90 | 5.50E+03 | 0 | 5.53 | 23 |
| A2 | -179. | 1.01E+03 | -154 | 857. | -119 |
| FD | 50.7 | 1.43E+03 | -18 | 255. | 56 |
| L1 | 0.213 | 5.55E+03 | -1 | 0.462 | 87 |
| L3 | 102. | 529. | -5 | 401. | 87 |
| L4 | 93.5 | 722. | -34 | 435. | 99 |
| NF | — | — | — | — | — |
| NS | -2.68E-03 | 4.61E+03 | -2 | 0.275 | -4 |

Table D–364. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.95E+03 | 7.03E+03 | -5.75E+03 | 5.79E+03 |
| A2 | -6.73E+03 | 6.70E+03 | -6.61E+03 | 6.60E+03 |
| FD | -2.97E+03 | 2.97E+03 | -2.94E+03 | 2.94E+03 |
| L1 | -5.55E+03 | 5.56E+03 | -5.55E+03 | 5.56E+03 |
| L3 | -2.01E+03 | 2.02E+03 | -2.00E+03 | 2.01E+03 |
| L4 | -2.56E+03 | 2.54E+03 | -2.51E+03 | 2.48E+03 |
| NF | — | — | — | — |
| NS | -4.30E+03 | 4.30E+03 | -4.28E+03 | 4.28E+03 |




Data identically zero, insufficient, or not available from NFA.

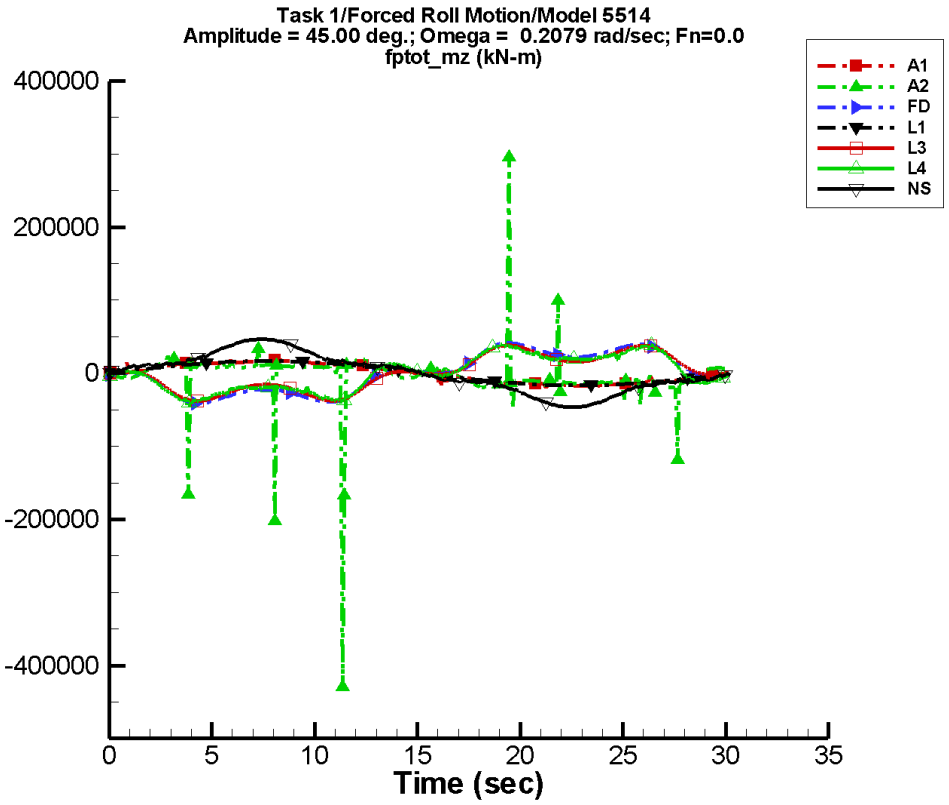
Figure D–183. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–365. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -17.8 | 1.10E+04 | 0 | 11.1 | 23 |
| A2 | -625. | 1.52E+04 | -4 | 864. | -45 |
| FD | 348. | 2.55E+04 | -180 | 1.73E+03 | 61 |
| L1 | 0.431 | 1.11E+04 | -1 | 0.923 | 87 |
| L3 | 661. | 2.54E+04 | 179 | 2.57E+03 | 87 |
| L4 | 677. | 2.47E+04 | -175 | 2.88E+03 | 98 |
| NF | — | — | — | — | — |
| NS | 0.203 | 8.74E+03 | -1 | 0.544 | 16 |

Table D–366. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.39E+04 | 1.41E+04 | -1.15E+04 | 1.16E+04 |
| A2 | -1.17E+05 | 1.87E+04 | -2.90E+04 | 1.72E+04 |
| FD | -3.43E+04 | 3.43E+04 | -3.43E+04 | 3.43E+04 |
| L1 | -1.11E+04 | 1.11E+04 | -1.11E+04 | 1.11E+04 |
| L3 | -3.35E+04 | 3.35E+04 | -3.35E+04 | 3.34E+04 |
| L4 | -3.40E+04 | 3.33E+04 | -3.30E+04 | 3.30E+04 |
| NF | — | — | — | — |
| NS | -7.93E+03 | 7.93E+03 | -7.49E+03 | 7.49E+03 |




Data identically zero, insufficient, or not available from NFA.

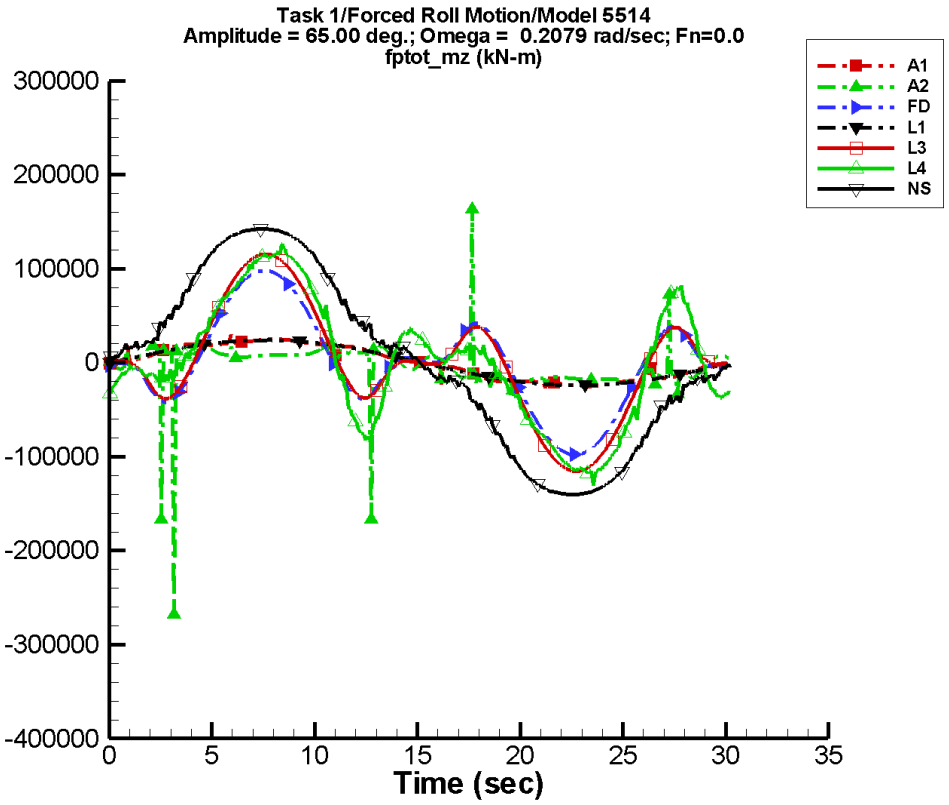
Figure D–184. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–367. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -26.7 | 1.65E+04 | 0 | 16.6 | 23 |
| A2 | -2.97E+03 | 7.74E+03 | 3 | 6.87E+03 | 4 |
| FD | 143. | 3.45E+04 | -177 | 811. | 141 |
| L1 | 0.658 | 1.66E+04 | -1 | 1.39 | 87 |
| L3 | -113. | 3.03E+04 | 179 | 689. | -83 |
| L4 | -251. | 2.91E+04 | -174 | 339. | -68 |
| NF | — | — | — | — | — |
| NS | 4.18 | 3.46E+04 | 1 | 3.56 | -101 |

Table D–368. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.08E+04 | 2.11E+04 | -1.73E+04 | 1.74E+04 |
| A2 | -4.29E+05 | 2.96E+05 | -7.11E+04 | 2.57E+04 |
| FD | -4.11E+04 | 4.11E+04 | -4.08E+04 | 4.08E+04 |
| L1 | -1.67E+04 | 1.67E+04 | -1.66E+04 | 1.67E+04 |
| L3 | -3.80E+04 | 3.80E+04 | -3.79E+04 | 3.79E+04 |
| L4 | -4.18E+04 | 3.99E+04 | -3.86E+04 | 3.79E+04 |
| NF | — | — | — | — |
| NS | -4.65E+04 | 4.65E+04 | -4.62E+04 | 4.62E+04 |




Data identically zero, insufficient, or not available from NFA.

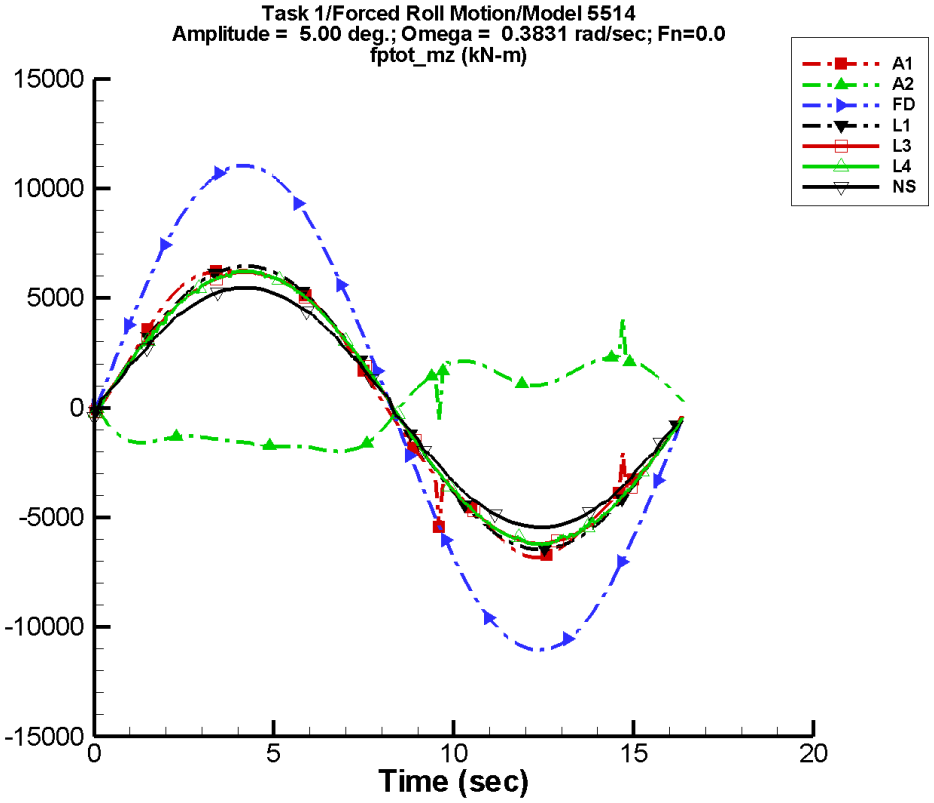
Figure D–185. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–369. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -38.5 | 2.38E+04 | 0 | 24.0 | 23 |
| A2 | -2.89E+03 | 1.46E+04 | -2 | 2.02E+03 | 85 |
| FD | -1.15E+03 | 4.27E+04 | -9 | 7.25E+03 | -129 |
| L1 | 0.959 | 2.40E+04 | -1 | 2.00 | 86 |
| L3 | -3.34E+03 | 5.50E+04 | -1 | 1.33E+04 | -92 |
| L4 | -4.86E+03 | 5.92E+04 | 4 | 1.59E+04 | -86 |
| NF | — | — | — | — | — |
| NS | 708. | 1.24E+05 | 1 | 678. | -90 |

Table D–370. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.01E+04 | 3.05E+04 | -2.49E+04 | 2.51E+04 |
| A2 | -2.68E+05 | 1.63E+05 | -3.20E+04 | 1.85E+04 |
| FD | -9.79E+04 | 9.79E+04 | -9.74E+04 | 9.74E+04 |
| L1 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.41E+04 |
| L3 | -1.16E+05 | 1.16E+05 | -1.15E+05 | 1.15E+05 |
| L4 | -1.31E+05 | 1.30E+05 | -1.19E+05 | 1.20E+05 |
| NF | — | — | — | — |
| NS | -1.40E+05 | 1.42E+05 | -1.40E+05 | 1.42E+05 |




Data identically zero, insufficient, or not available from NFA.

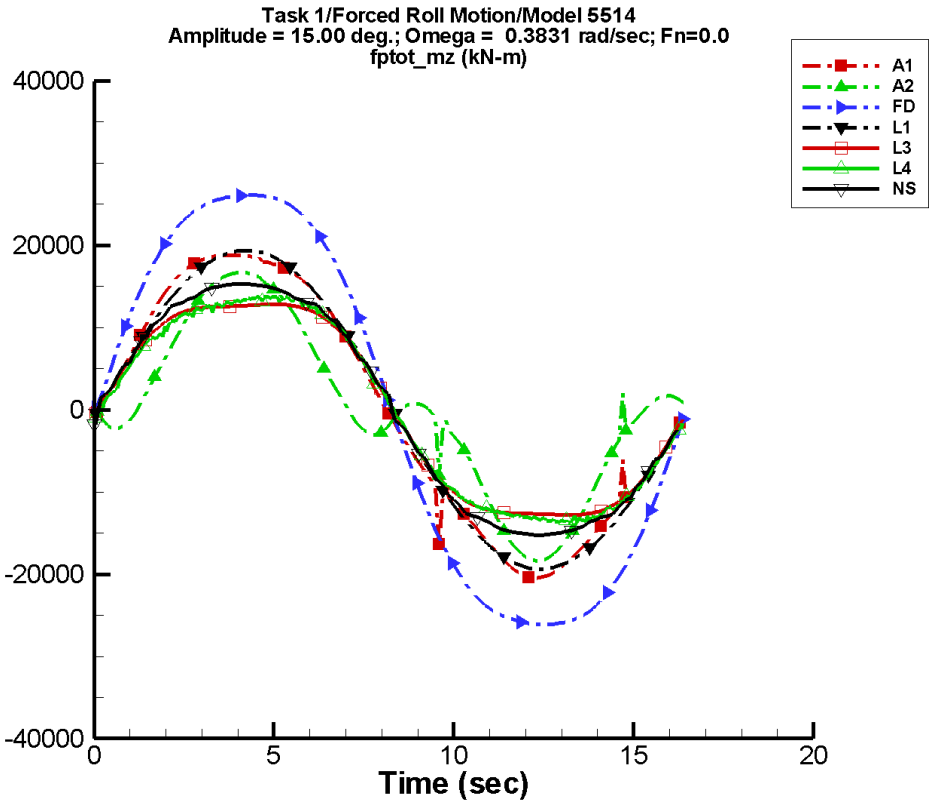
Figure D–186. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–371. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -14.8 | 6.46E+03 | 0 | 31.4 | -12 |
| A2 | -37.2 | 2.05E+03 | 173 | 126. | -108 |
| FD | 0.880 | 1.11E+04 | -2 | 2.87 | 100 |
| L1 | 2.51E-02 | 6.46E+03 | -3 | 0.410 | -171 |
| L3 | 4.38 | 6.24E+03 | -3 | 7.11 | 41 |
| L4 | -1.45 | 6.22E+03 | -3 | 22.9 | -154 |
| NF | — | — | — | — | — |
| NS | 7.07E-02 | 5.51E+03 | -2 | 0.617 | 162 |

Table D–372. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.83E+03 | 6.97E+03 | -6.78E+03 | 6.26E+03 |
| A2 | -1.99E+03 | 4.04E+03 | -1.97E+03 | 2.50E+03 |
| FD | -1.10E+04 | 1.10E+04 | -1.10E+04 | 1.10E+04 |
| L1 | -6.46E+03 | 6.46E+03 | -6.45E+03 | 6.45E+03 |
| L3 | -6.20E+03 | 6.20E+03 | -6.20E+03 | 6.19E+03 |
| L4 | -6.23E+03 | 6.22E+03 | -6.22E+03 | 6.22E+03 |
| NF | — | — | — | — |
| NS | -5.47E+03 | 5.48E+03 | -5.41E+03 | 5.42E+03 |




Data identically zero, insufficient, or not available from NFA.

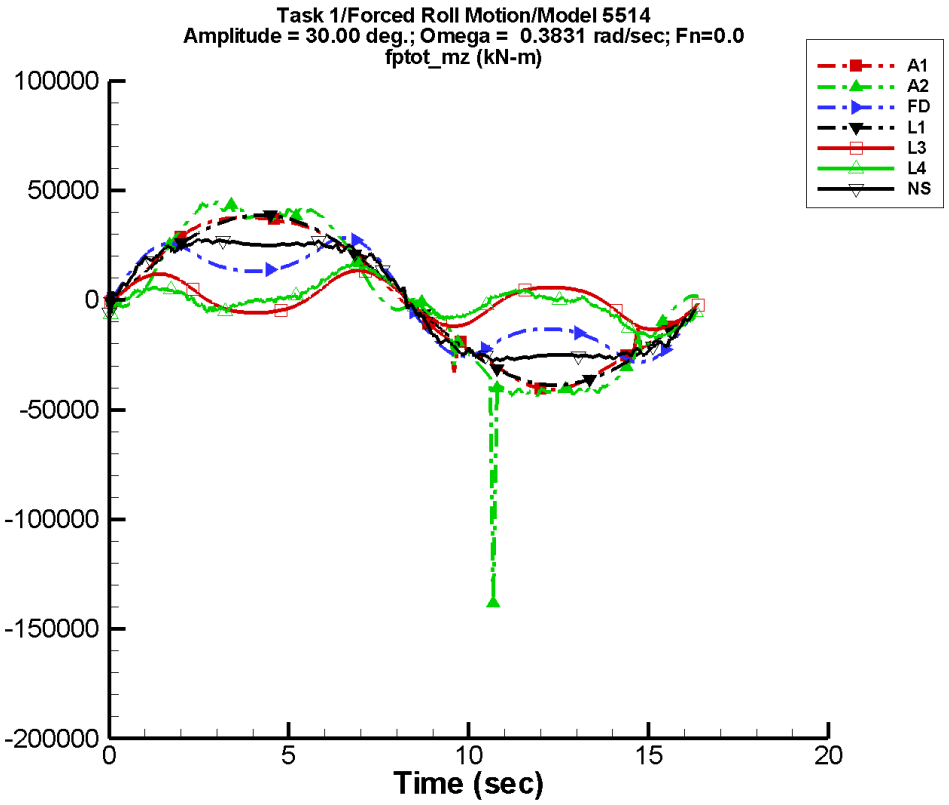
Figure D–187. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–373. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -44.2 | 1.94E+04 | 0 | 94.1 | -12 |
| A2 | -200. | 1.30E+04 | -1 | 864. | -115 |
| FD | 57.9 | 2.81E+04 | -2 | 394. | 76 |
| L1 | 7.35E-02 | 1.94E+04 | -3 | 1.23 | -171 |
| L3 | 98.3 | 1.45E+04 | -2 | 186. | 28 |
| L4 | -28.3 | 1.48E+04 | -4 | 47.4 | -95 |
| NF | — | — | — | — | — |
| NS | 0.206 | 1.62E+04 | -2 | 1.62 | 168 |

Table D–374. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.05E+04 | 2.09E+04 | -2.03E+04 | 1.88E+04 |
| A2 | -1.84E+04 | 1.78E+04 | -1.81E+04 | 1.65E+04 |
| FD | -2.61E+04 | 2.61E+04 | -2.61E+04 | 2.61E+04 |
| L1 | -1.94E+04 | 1.94E+04 | -1.94E+04 | 1.94E+04 |
| L3 | -1.28E+04 | 1.28E+04 | -1.28E+04 | 1.28E+04 |
| L4 | -1.38E+04 | 1.38E+04 | -1.36E+04 | 1.36E+04 |
| NF | — | — | — | — |
| NS | -1.53E+04 | 1.53E+04 | -1.52E+04 | 1.52E+04 |




Data identically zero, insufficient, or not available from NFA.

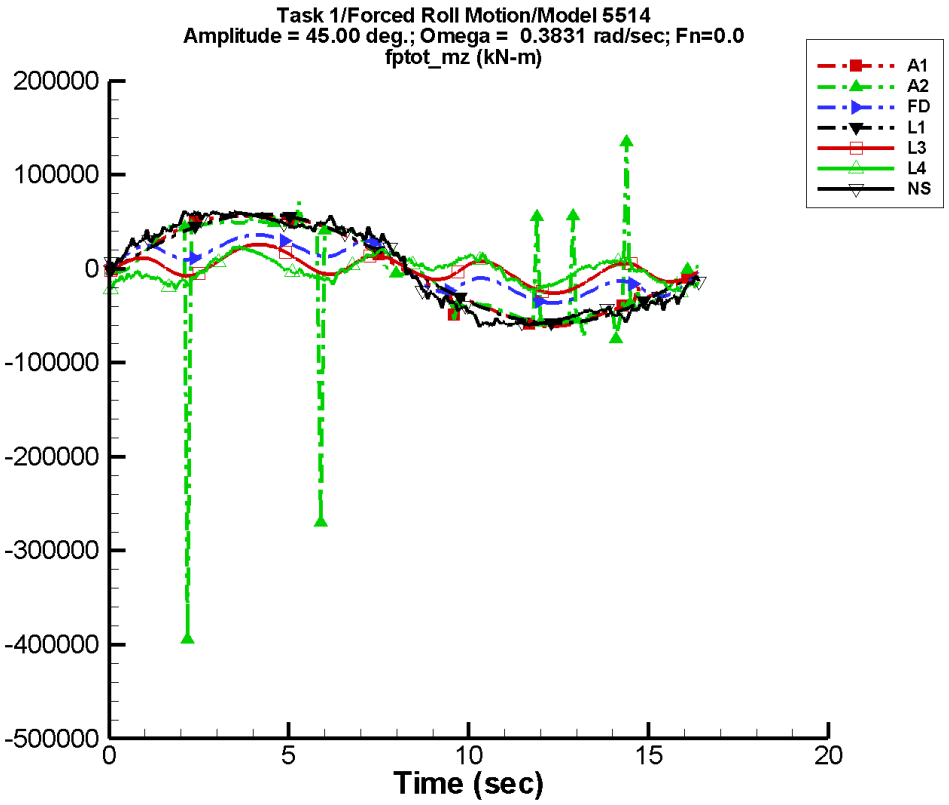
Figure D–188. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–375. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -88.5 | 3.88E+04 | 0 | 188. | -12 |
| A2 | -946. | 4.34E+04 | 0 | 1.03E+03 | -155 |
| FD | 378. | 2.36E+04 | -2 | 2.66E+03 | 75 |
| L1 | 0.159 | 3.88E+04 | -3 | 2.45 | -171 |
| L3 | 665. | 2.96E+03 | 4 | 1.26E+03 | 31 |
| L4 | 29.1 | 5.93E+03 | -44 | 476. | -14 |
| NF | — | — | — | — | — |
| NS | 0.336 | 3.08E+04 | -2 | 2.58 | 157 |

Table D–376. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.09E+04 | 4.18E+04 | -4.06E+04 | 3.75E+04 |
| A2 | -1.38E+05 | 4.79E+04 | -5.09E+04 | 4.30E+04 |
| FD | -2.83E+04 | 2.83E+04 | -2.78E+04 | 2.78E+04 |
| L1 | -3.88E+04 | 3.88E+04 | -3.87E+04 | 3.87E+04 |
| L3 | -1.34E+04 | 1.34E+04 | -1.33E+04 | 1.33E+04 |
| L4 | -1.72E+04 | 1.64E+04 | -1.66E+04 | 1.56E+04 |
| NF | — | — | — | — |
| NS | -2.81E+04 | 2.81E+04 | -2.69E+04 | 2.70E+04 |




Data identically zero, insufficient, or not available from NFA.

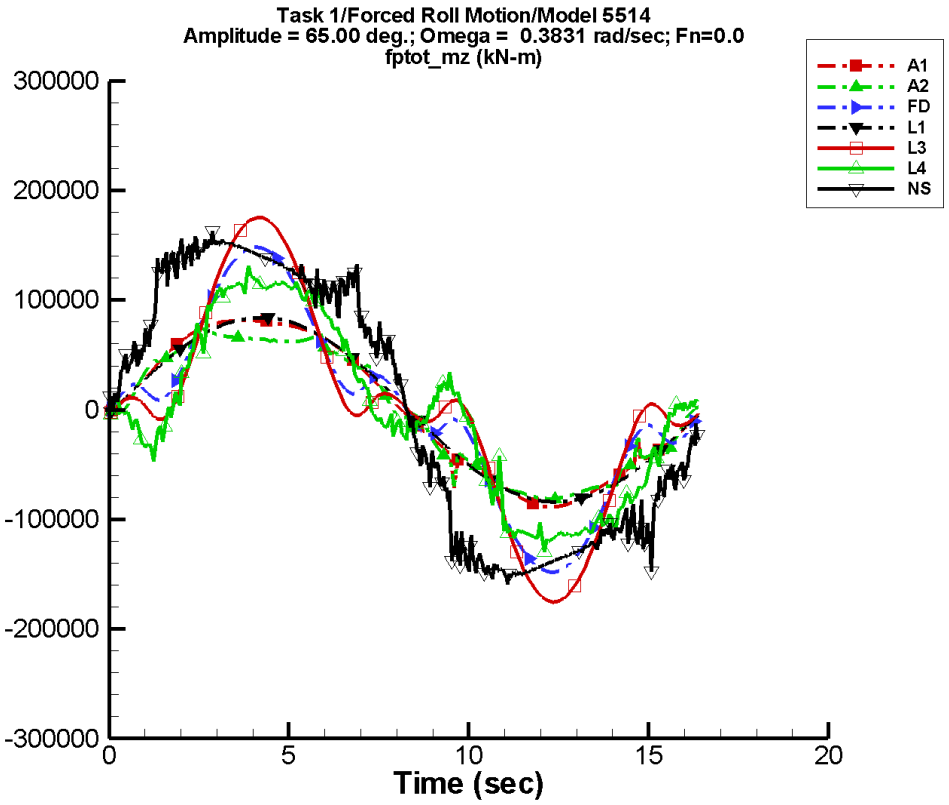
Figure D–189. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–377. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -133. | 5.81E+04 | 0 | 282. | -12 |
| A2 | -1.78E+03 | 4.71E+04 | 2 | 1.09E+03 | -130 |
| FD | 85.2 | 2.94E+04 | -2 | 997. | 56 |
| L1 | 0.254 | 5.82E+04 | -3 | 3.68 | -171 |
| L3 | 13.0 | 1.11E+04 | -7 | 743. | 119 |
| L4 | -1.82E+03 | 8.68E+03 | -66 | 1.76E+03 | -124 |
| NF | — | — | — | — | — |
| NS | -3.96 | 6.24E+04 | 0 | 12.0 | 130 |

Table D–378. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.14E+04 | 6.27E+04 | -6.10E+04 | 5.63E+04 |
| A2 | -3.95E+05 | 1.35E+05 | -5.07E+04 | 5.40E+04 |
| FD | -3.62E+04 | 3.62E+04 | -3.55E+04 | 3.55E+04 |
| L1 | -5.82E+04 | 5.81E+04 | -5.81E+04 | 5.81E+04 |
| L3 | -2.59E+04 | 2.59E+04 | -2.56E+04 | 2.56E+04 |
| L4 | -2.51E+04 | 2.39E+04 | -2.19E+04 | 2.19E+04 |
| NF | — | — | — | — |
| NS | -6.20E+04 | 6.19E+04 | -5.86E+04 | 5.89E+04 |




Data identically zero, insufficient, or not available from NFA.

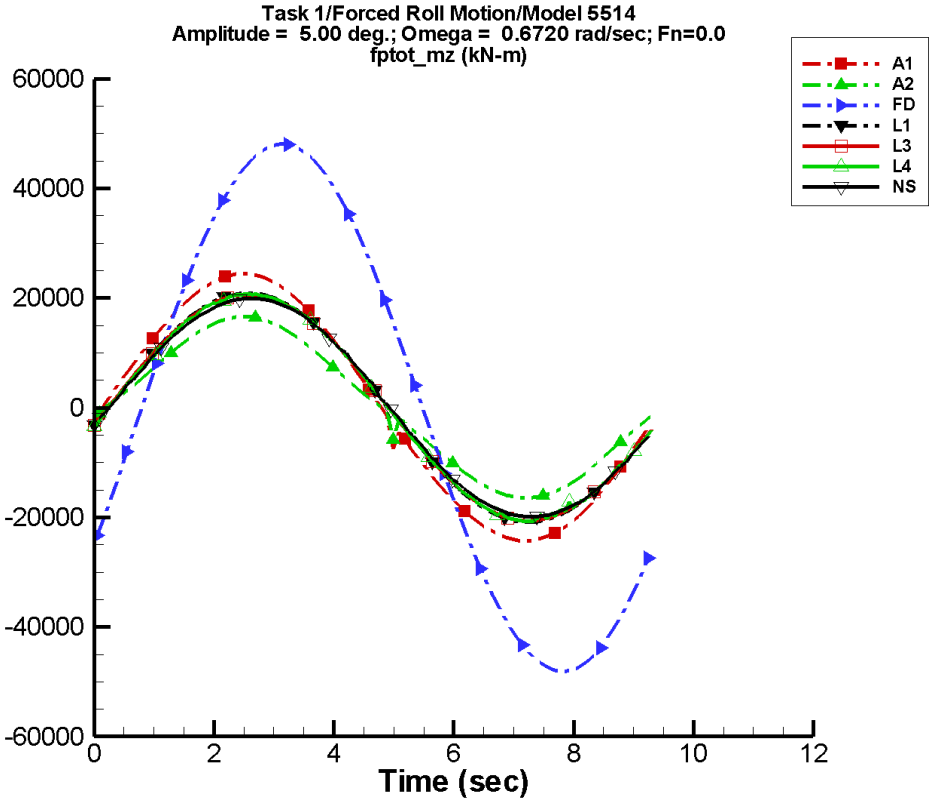
Figure D–190. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–379. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -192. | 8.40E+04 | 0 | 408. | -12 |
| A2 | -2.44E+03 | 7.68E+04 | 0 | 3.06E+03 | 70 |
| FD | -833. | 1.09E+05 | -2 | 6.73E+03 | -104 |
| L1 | 0.389 | 8.40E+04 | -3 | 5.33 | -171 |
| L3 | -3.09E+03 | 1.12E+05 | -5 | 6.22E+03 | -164 |
| L4 | -5.32E+03 | 9.86E+04 | -12 | 7.04E+03 | -137 |
| NF | — | — | — | — | — |
| NS | 679. | 1.59E+05 | 1 | 553. | -84 |

Table D–380. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.87E+04 | 9.06E+04 | -8.80E+04 | 8.13E+04 |
| A2 | -8.13E+04 | 7.61E+04 | -8.09E+04 | 7.01E+04 |
| FD | -1.48E+05 | 1.48E+05 | -1.47E+05 | 1.47E+05 |
| L1 | -8.40E+04 | 8.40E+04 | -8.39E+04 | 8.39E+04 |
| L3 | -1.75E+05 | 1.75E+05 | -1.75E+05 | 1.75E+05 |
| L4 | -1.29E+05 | 1.31E+05 | -1.18E+05 | 1.19E+05 |
| NF | — | — | — | — |
| NS | -1.59E+05 | 1.63E+05 | -1.51E+05 | 1.54E+05 |




Data identically zero, insufficient, or not available from NFA.

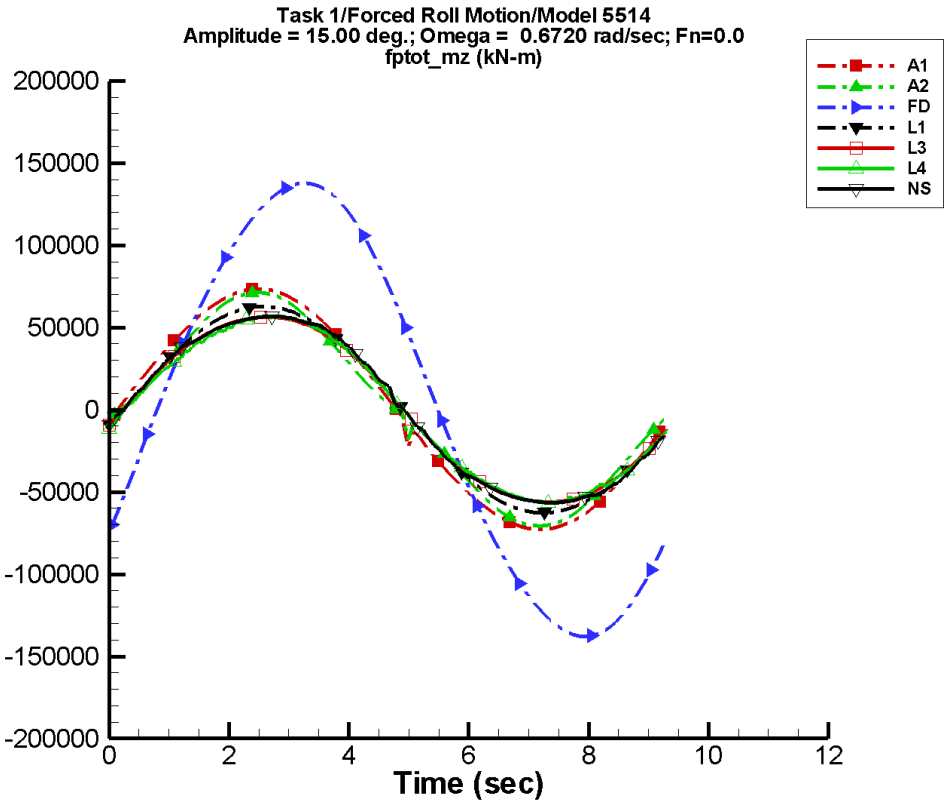
Figure D–191. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–381. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -33.6 | 2.41E+04 | -5 | 87.2 | -81 |
| A2 | -76.3 | 1.56E+04 | -6 | 160. | -113 |
| FD | 2.71 | 4.81E+04 | -31 | 5.88 | 130 |
| L1 | 0.563 | 2.09E+04 | -9 | 1.25 | -131 |
| L3 | 4.48 | 2.07E+04 | -9 | 6.24 | 37 |
| L4 | -12.8 | 2.05E+04 | -9 | 153. | -159 |
| NF | — | — | — | — | — |
| NS | -1.07 | 2.00E+04 | -10 | 3.40 | -157 |

Table D–382. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.43E+04 | 2.45E+04 | -2.40E+04 | 2.41E+04 |
| A2 | -1.65E+04 | 1.66E+04 | -1.62E+04 | 1.64E+04 |
| FD | -4.81E+04 | 4.81E+04 | -4.75E+04 | 4.76E+04 |
| L1 | -2.09E+04 | 2.09E+04 | -2.08E+04 | 2.08E+04 |
| L3 | -2.06E+04 | 2.07E+04 | -2.06E+04 | 2.06E+04 |
| L4 | -2.07E+04 | 2.08E+04 | -2.05E+04 | 2.06E+04 |
| NF | — | — | — | — |
| NS | -1.99E+04 | 1.99E+04 | -1.97E+04 | 1.97E+04 |




Data identically zero, insufficient, or not available from NFA.

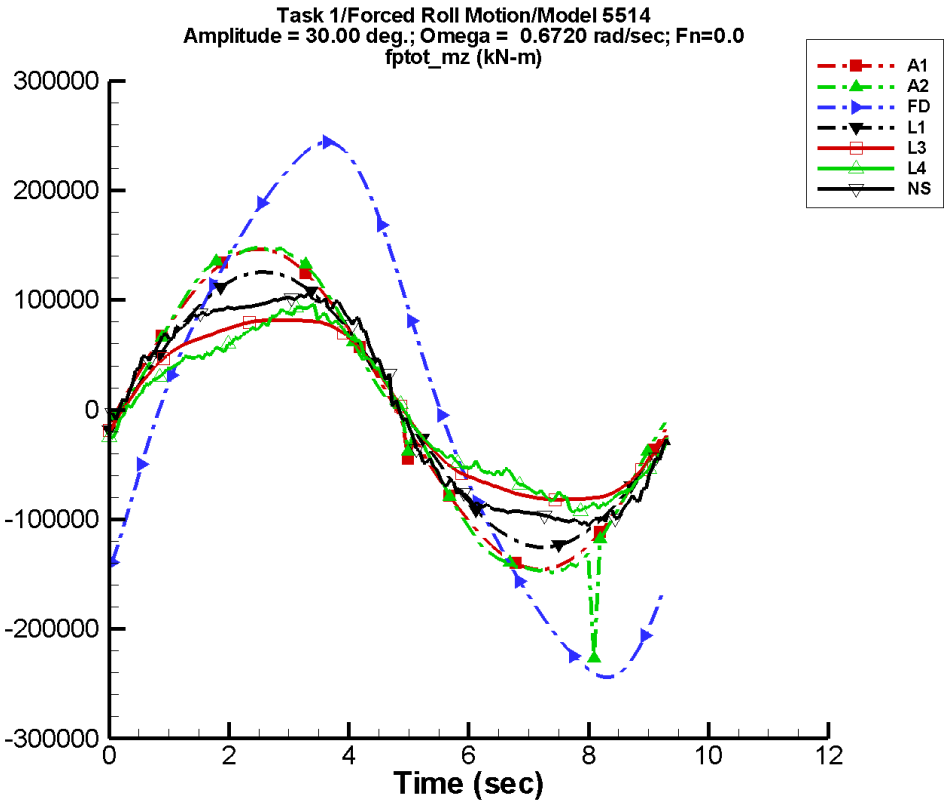
Figure D–192. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–383. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -101. | 7.23E+04 | -5 | 261. | -81 |
| A2 | -390. | 6.57E+04 | -6 | 816. | -124 |
| FD | 186. | 1.38E+05 | -32 | 385. | 135 |
| L1 | 1.72 | 6.27E+04 | -9 | 3.74 | -131 |
| L3 | 103. | 5.78E+04 | -9 | 189. | 24 |
| L4 | -317. | 5.71E+04 | -11 | 661. | -162 |
| NF | — | — | — | — | — |
| NS | -3.19 | 5.90E+04 | -11 | 10.2 | 176 |

Table D–384. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.28E+04 | 7.33E+04 | -7.19E+04 | 7.24E+04 |
| A2 | -7.07E+04 | 7.13E+04 | -6.96E+04 | 7.01E+04 |
| FD | -1.38E+05 | 1.38E+05 | -1.36E+05 | 1.36E+05 |
| L1 | -6.27E+04 | 6.27E+04 | -6.24E+04 | 6.25E+04 |
| L3 | -5.62E+04 | 5.62E+04 | -5.60E+04 | 5.60E+04 |
| L4 | -5.68E+04 | 5.71E+04 | -5.62E+04 | 5.64E+04 |
| NF | — | — | — | — |
| NS | -5.65E+04 | 5.66E+04 | -5.61E+04 | 5.62E+04 |




Data identically zero, insufficient, or not available from NFA.

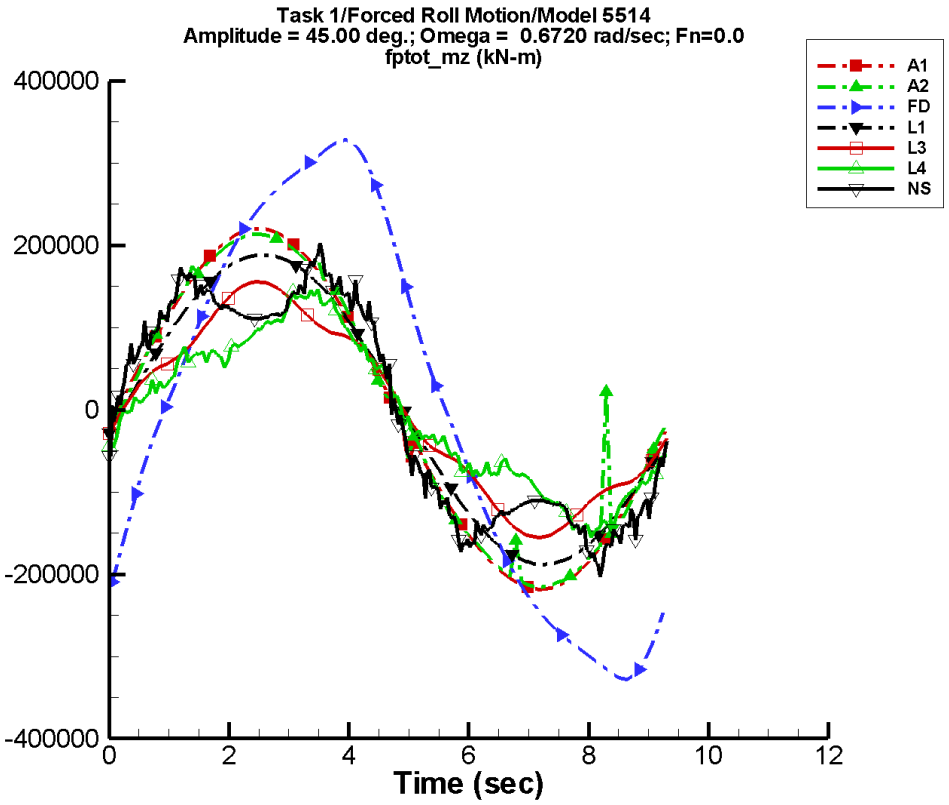
Figure D–193. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–385. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -202. | 1.45E+05 | -5 | 523. | -81 |
| A2 | -1.61E+03 | 1.50E+05 | -6 | 2.23E+03 | -24 |
| FD | 1.26E+03 | 2.34E+05 | -37 | 2.76E+03 | 130 |
| L1 | 3.45 | 1.25E+05 | -9 | 7.41 | -132 |
| L3 | 643. | 8.97E+04 | -11 | 1.25E+03 | 31 |
| L4 | -602. | 8.66E+04 | -17 | 963. | -140 |
| NF | — | — | — | — | — |
| NS | -4.34 | 1.12E+05 | -10 | 13.8 | -143 |

Table D–386. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.46E+05 | 1.47E+05 | -1.44E+05 | 1.45E+05 |
| A2 | -2.27E+05 | 1.48E+05 | -1.48E+05 | 1.46E+05 |
| FD | -2.44E+05 | 2.44E+05 | -2.40E+05 | 2.40E+05 |
| L1 | -1.25E+05 | 1.25E+05 | -1.25E+05 | 1.25E+05 |
| L3 | -8.19E+04 | 8.20E+04 | -8.18E+04 | 8.19E+04 |
| L4 | -9.39E+04 | 9.64E+04 | -8.95E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | -1.06E+05 | 1.06E+05 | -1.02E+05 | 1.03E+05 |




Data identically zero, insufficient, or not available from NFA.

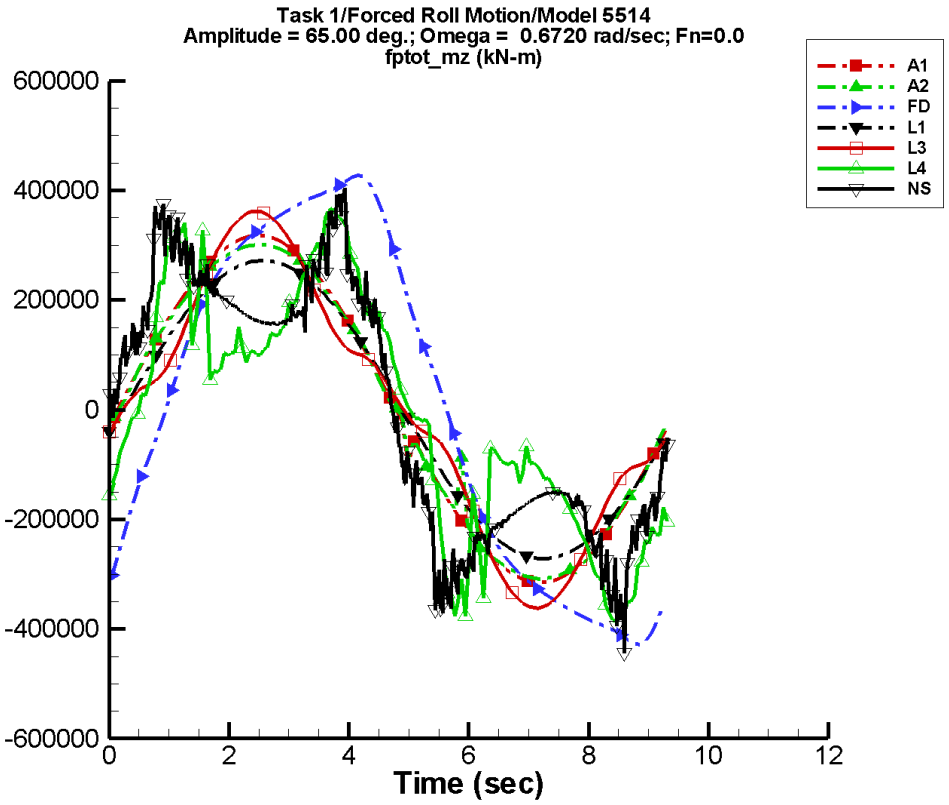
Figure D–194. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–387. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -302. | 2.17E+05 | -5 | 784. | -81 |
| A2 | 1.80E+03 | 2.11E+05 | -4 | 3.13E+03 | -163 |
| FD | 1.21E+03 | 3.16E+05 | -40 | 4.34E+03 | 104 |
| L1 | 5.27 | 1.88E+05 | -9 | 11.2 | -131 |
| L3 | -233. | 1.41E+05 | -11 | 1.30E+03 | 130 |
| L4 | -2.88E+03 | 1.22E+05 | -20 | 1.87E+03 | -41 |
| NF | — | — | — | — | — |
| NS | -16.9 | 1.68E+05 | -8 | 33.4 | -46 |

Table D–388. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.20E+05 | -2.16E+05 | 2.17E+05 |
| A2 | -2.16E+05 | 2.14E+05 | -2.12E+05 | 2.11E+05 |
| FD | -3.28E+05 | 3.28E+05 | -3.20E+05 | 3.20E+05 |
| L1 | -1.88E+05 | 1.88E+05 | -1.87E+05 | 1.87E+05 |
| L3 | -1.55E+05 | 1.55E+05 | -1.54E+05 | 1.54E+05 |
| L4 | -1.56E+05 | 1.47E+05 | -1.45E+05 | 1.39E+05 |
| NF | — | — | — | — |
| NS | -2.03E+05 | 2.03E+05 | -1.82E+05 | 1.82E+05 |




Data identically zero, insufficient, or not available from NFA.

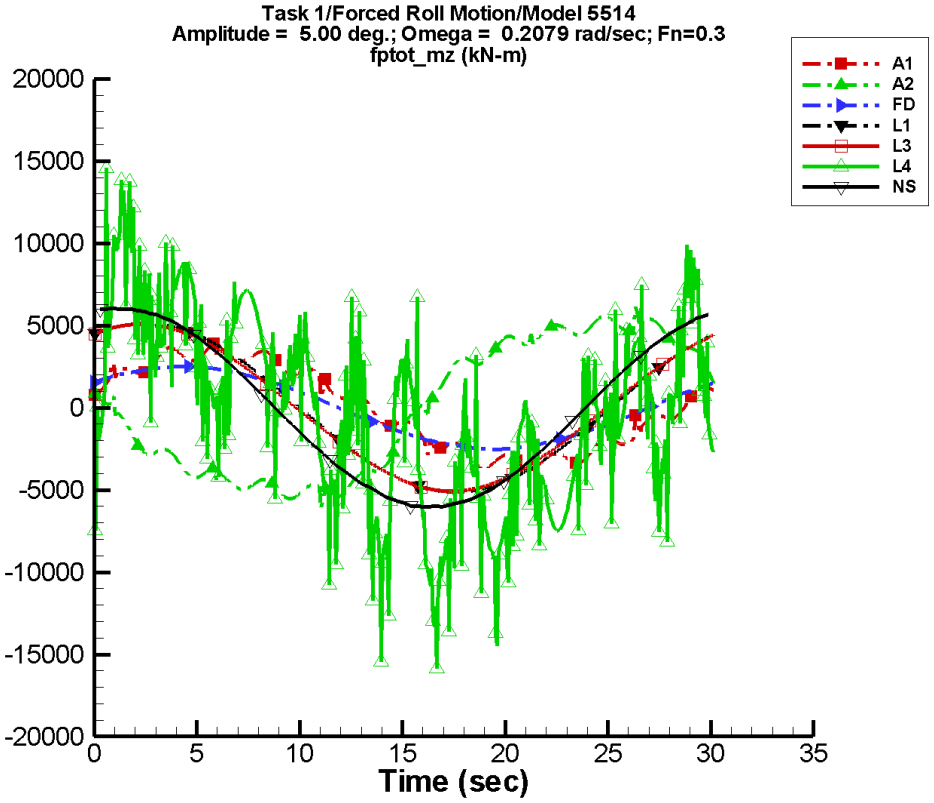
Figure D–195. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–389. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -437. | 3.13E+05 | -5 | 1.13E+03 | -81 |
| A2 | -1.37E+03 | 3.05E+05 | -5 | 3.39E+03 | 24 |
| FD | 99.5 | 4.28E+05 | -39 | 7.22E+03 | 75 |
| L1 | 7.71 | 2.72E+05 | -9 | 16.0 | -132 |
| L3 | -3.26E+03 | 2.99E+05 | -9 | 6.57E+03 | -168 |
| L4 | 644. | 2.65E+05 | -18 | 2.33E+04 | -28 |
| NF | — | — | — | — | — |
| NS | 569. | 2.78E+05 | -3 | 623. | -116 |

Table D–390. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.16E+05 | 3.18E+05 | -3.12E+05 | 3.14E+05 |
| A2 | -3.08E+05 | 3.01E+05 | -3.04E+05 | 2.97E+05 |
| FD | -4.28E+05 | 4.28E+05 | -4.15E+05 | 4.15E+05 |
| L1 | -2.72E+05 | 2.72E+05 | -2.71E+05 | 2.71E+05 |
| L3 | -3.62E+05 | 3.62E+05 | -3.59E+05 | 3.59E+05 |
| L4 | -3.85E+05 | 3.67E+05 | -3.68E+05 | 3.43E+05 |
| NF | — | — | — | — |
| NS | -4.43E+05 | 4.04E+05 | -3.67E+05 | 3.74E+05 |




Data identically zero, insufficient, or not available from NFA.

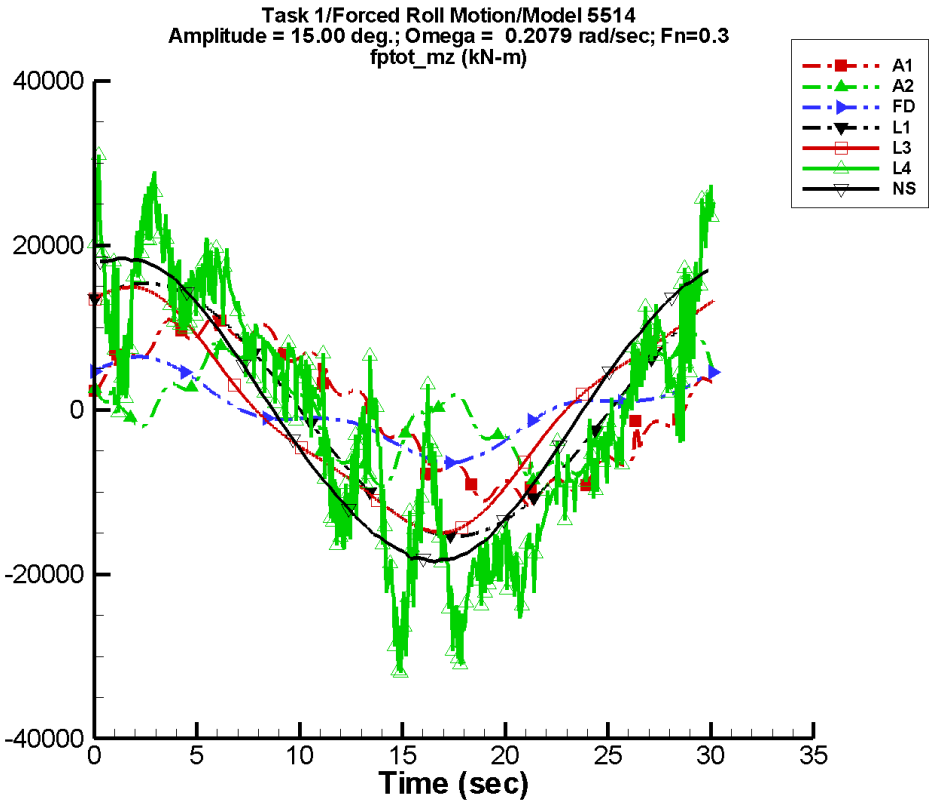
Figure D–196. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–391. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.81 | 3.40E+03 | 21 | 5.02 | -19 |
| A2 | -26.5 | 5.49E+03 | 166 | 128. | -118 |
| FD | 0.115 | 2.50E+03 | 38 | 0.789 | -8 |
| L1 | -0.836 | 5.12E+03 | 61 | 0.146 | -158 |
| L3 | 2.50 | 5.02E+03 | 63 | 15.1 | 87 |
| L4 | -135. | 5.96E+03 | 51 | 290. | 77 |
| NF | — | — | — | — | — |
| NS | 1.75E-02 | 6.03E+03 | 75 | 7.46E-02 | 52 |

Table D–392. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.89E+03 | 3.89E+03 | -3.65E+03 | 3.66E+03 |
| A2 | -6.13E+03 | 6.12E+03 | -5.46E+03 | 5.48E+03 |
| FD | -2.53E+03 | 2.53E+03 | -2.52E+03 | 2.52E+03 |
| L1 | -5.13E+03 | 5.12E+03 | -5.12E+03 | 5.12E+03 |
| L3 | -5.08E+03 | 5.08E+03 | -5.08E+03 | 5.08E+03 |
| L4 | -1.59E+04 | 1.48E+04 | -1.20E+04 | 1.15E+04 |
| NF | — | — | — | — |
| NS | -6.04E+03 | 6.04E+03 | -5.97E+03 | 5.97E+03 |




Data identically zero, insufficient, or not available from NFA.

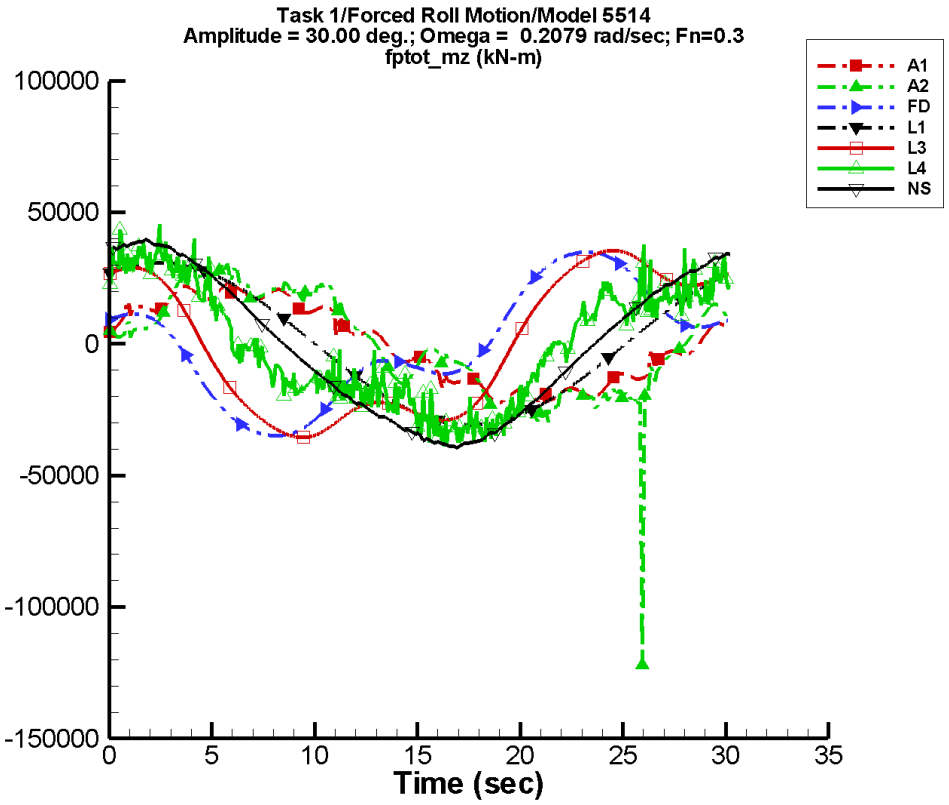
Figure D–197. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–393. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.42 | 1.02E+04 | 21 | 15.0 | -19 |
| A2 | -175. | 4.47E+03 | 46 | 859. | -118 |
| FD | 49.7 | 4.96E+03 | 74 | 258. | 58 |
| L1 | -0.919 | 1.54E+04 | 61 | 0.174 | -158 |
| L3 | 100. | 1.37E+04 | 79 | 401. | 87 |
| L4 | -585. | 1.88E+04 | 54 | 489. | 178 |
| NF | — | — | — | — | — |
| NS | 1.59E-02 | 1.82E+04 | 75 | 0.429 | 35 |

Table D–394. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.17E+04 | 1.17E+04 | -1.09E+04 | 1.10E+04 |
| A2 | -9.39E+03 | 9.14E+03 | -9.07E+03 | 8.83E+03 |
| FD | -6.46E+03 | 6.46E+03 | -6.43E+03 | 6.43E+03 |
| L1 | -1.54E+04 | 1.54E+04 | -1.54E+04 | 1.54E+04 |
| L3 | -1.50E+04 | 1.50E+04 | -1.49E+04 | 1.49E+04 |
| L4 | -3.20E+04 | 3.10E+04 | -2.75E+04 | 2.52E+04 |
| NF | — | — | — | — |
| NS | -1.85E+04 | 1.85E+04 | -1.82E+04 | 1.82E+04 |




Data identically zero, insufficient, or not available from NFA.

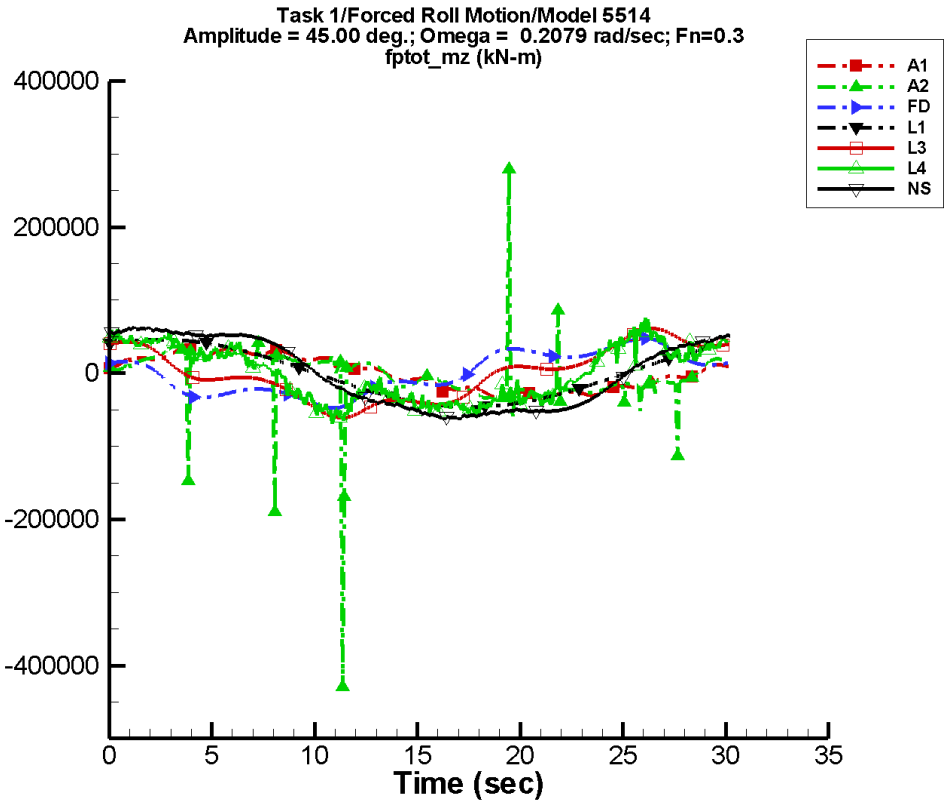
Figure D–198. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–395. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -10.8 | 2.04E+04 | 21 | 30.1 | -19 |
| A2 | -618. | 2.40E+04 | 15 | 887. | -45 |
| FD | 340. | 2.75E+04 | 158 | 1.76E+03 | 63 |
| L1 | -0.969 | 3.07E+04 | 61 | 0.150 | -146 |
| L3 | 659. | 3.48E+04 | 128 | 2.57E+03 | 87 |
| L4 | 411. | 2.95E+04 | 89 | 2.65E+03 | 100 |
| NF | — | — | — | — | — |
| NS | 0.506 | 3.68E+04 | 76 | 1.16 | 44 |

Table D–396. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.33E+04 | 2.33E+04 | -2.19E+04 | 2.20E+04 |
| A2 | -1.22E+05 | 3.06E+04 | -3.34E+04 | 2.81E+04 |
| FD | -3.49E+04 | 3.49E+04 | -3.48E+04 | 3.48E+04 |
| L1 | -3.07E+04 | 3.07E+04 | -3.07E+04 | 3.07E+04 |
| L3 | -3.55E+04 | 3.55E+04 | -3.55E+04 | 3.55E+04 |
| L4 | -3.89E+04 | 4.53E+04 | -3.45E+04 | 3.61E+04 |
| NF | — | — | — | — |
| NS | -3.96E+04 | 3.96E+04 | -3.85E+04 | 3.85E+04 |




Data identically zero, insufficient, or not available from NFA.

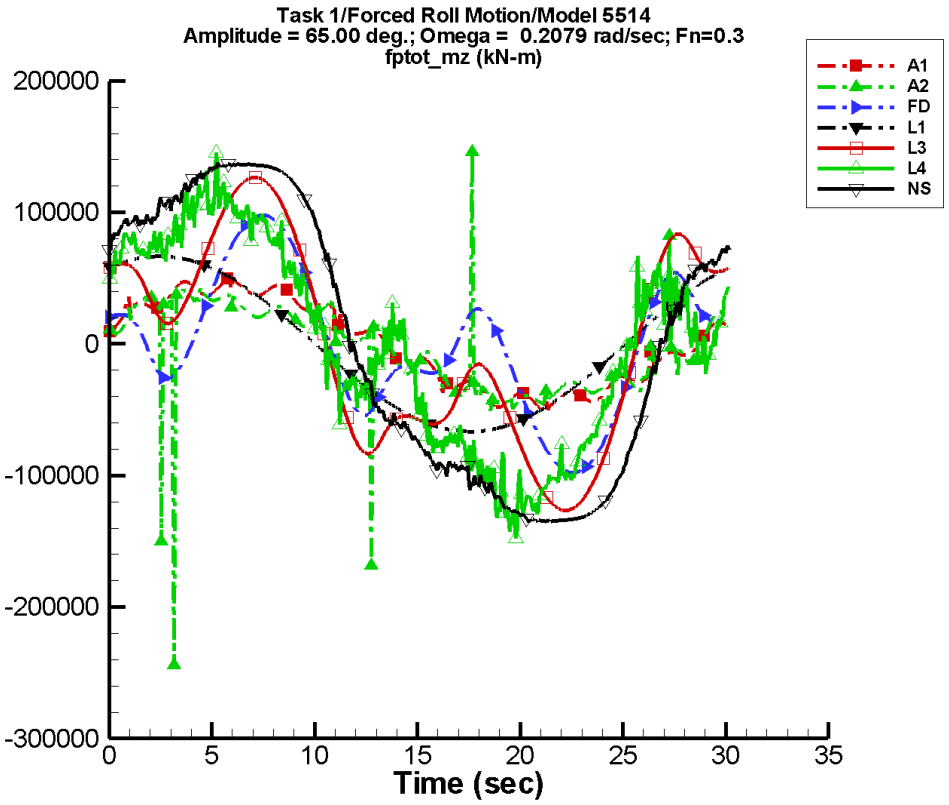
Figure D–199. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–397. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -16.3 | 3.06E+04 | 21 | 45.1 | -19 |
| A2 | -2.96E+03 | 2.28E+04 | 30 | 6.89E+03 | 3 |
| FD | 116. | 3.70E+04 | 159 | 997. | 137 |
| L1 | -1.03 | 4.61E+04 | 61 | 0.202 | -141 |
| L3 | -116. | 4.79E+04 | 120 | 691. | -83 |
| L4 | -73.6 | 4.87E+04 | 89 | 1.14E+03 | 81 |
| NF | — | — | — | — | — |
| NS | 9.19 | 6.34E+04 | 57 | 9.74 | -90 |

Table D–398. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.50E+04 | 3.50E+04 | -3.28E+04 | 3.29E+04 |
| A2 | -4.30E+05 | 2.79E+05 | -7.21E+04 | 3.56E+04 |
| FD | -4.74E+04 | 4.74E+04 | -4.71E+04 | 4.71E+04 |
| L1 | -4.61E+04 | 4.61E+04 | -4.61E+04 | 4.61E+04 |
| L3 | -6.09E+04 | 6.09E+04 | -6.07E+04 | 6.07E+04 |
| L4 | -7.01E+04 | 7.59E+04 | -5.82E+04 | 6.27E+04 |
| NF | — | — | — | — |
| NS | -6.35E+04 | 6.35E+04 | -6.09E+04 | 6.09E+04 |




Data identically zero, insufficient, or not available from NFA.

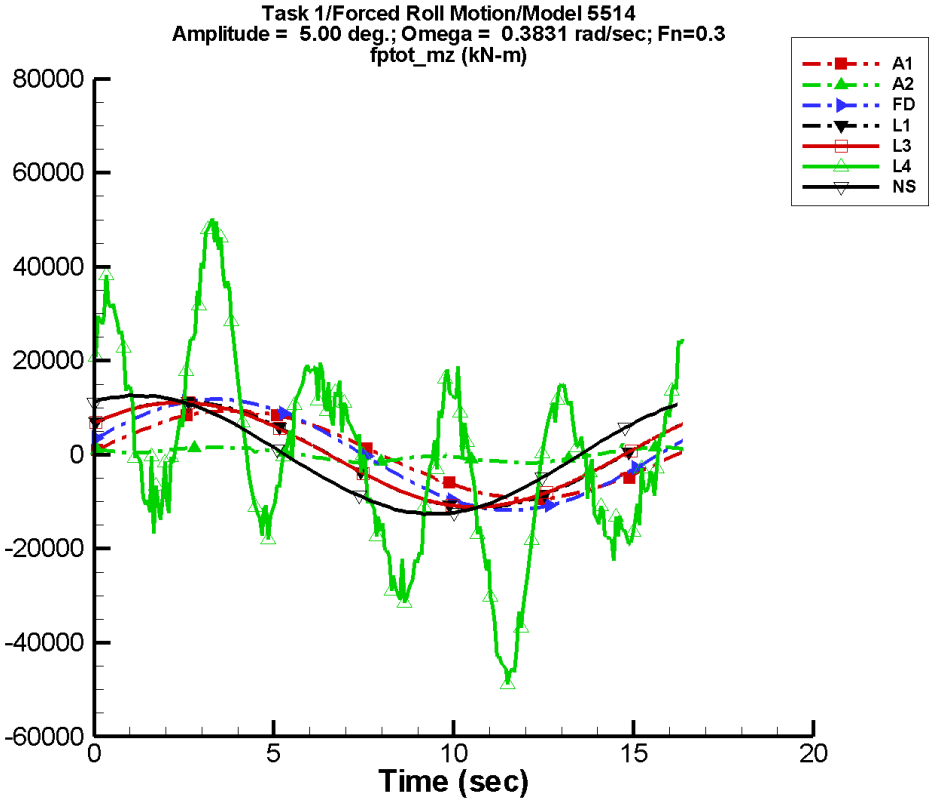
Figure D–200. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–399. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -23.5 | 4.42E+04 | 21 | 65.2 | -19 |
| A2 | -2.87E+03 | 3.54E+04 | 25 | 1.99E+03 | 84 |
| FD | -1.23E+03 | 4.37E+04 | 17 | 7.07E+03 | -134 |
| L1 | -1.06 | 6.66E+04 | 61 | 0.268 | -134 |
| L3 | -3.34E+03 | 8.61E+04 | 42 | 1.33E+04 | -92 |
| L4 | -1.24E+03 | 9.93E+04 | 41 | 2.86E+03 | -102 |
| NF | — | — | — | — | — |
| NS | 593. | 1.40E+05 | 31 | 584. | -91 |

Table D–400. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.05E+04 | 5.06E+04 | -4.74E+04 | 4.76E+04 |
| A2 | -2.44E+05 | 1.46E+05 | -4.43E+04 | 4.21E+04 |
| FD | -9.79E+04 | 9.80E+04 | -9.74E+04 | 9.74E+04 |
| L1 | -6.66E+04 | 6.66E+04 | -6.66E+04 | 6.66E+04 |
| L3 | -1.27E+05 | 1.27E+05 | -1.26E+05 | 1.26E+05 |
| L4 | -1.48E+05 | 1.46E+05 | -1.34E+05 | 1.18E+05 |
| NF | — | — | — | — |
| NS | -1.35E+05 | 1.38E+05 | -1.35E+05 | 1.36E+05 |




Data identically zero, insufficient, or not available from NFA.

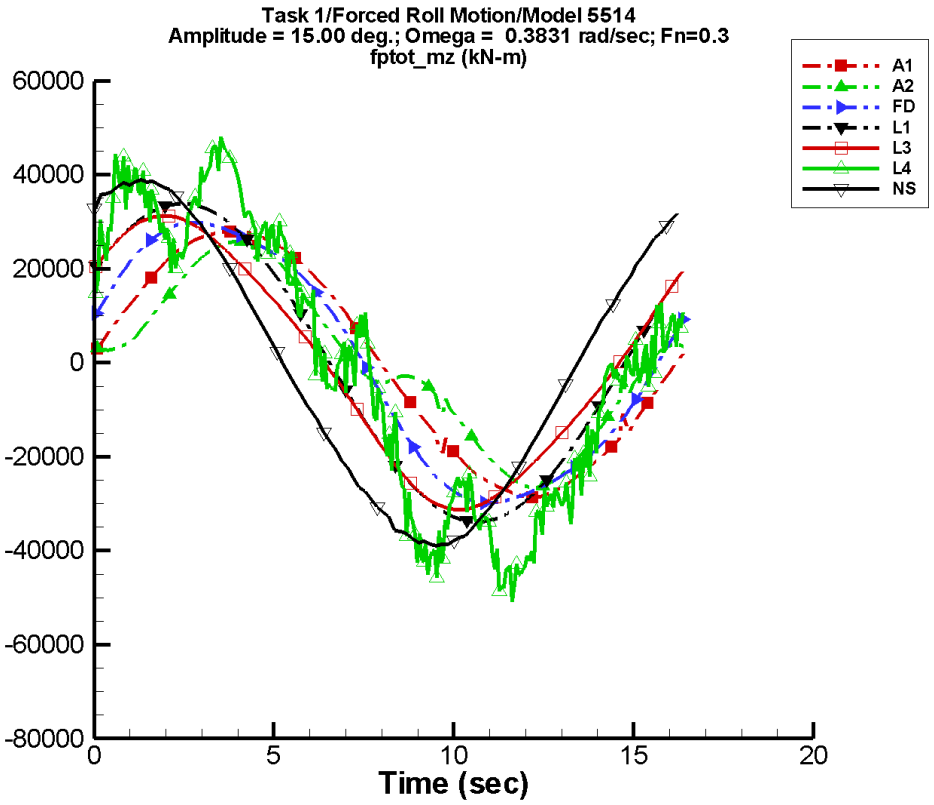
Figure D–201. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–401. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.06 | 9.36E+03 | 5 | 36.0 | 46 |
| A2 | -27.5 | 1.32E+03 | 51 | 98.2 | -116 |
| FD | 1.04 | 1.18E+04 | 16 | 3.37 | 110 |
| L1 | -0.669 | 1.13E+04 | 36 | 1.64E-02 | 57 |
| L3 | 2.81 | 1.11E+04 | 37 | 7.45 | 39 |
| L4 | -282. | 1.46E+04 | 31 | 1.95E+03 | 143 |
| NF | — | — | — | — | — |
| NS | -0.332 | 1.26E+04 | 63 | 1.04 | -127 |

Table D–402. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -9.56E+03 | 9.64E+03 | -9.50E+03 | 9.31E+03 |
| A2 | -1.74E+03 | 2.47E+03 | -1.69E+03 | 1.55E+03 |
| FD | -1.18E+04 | 1.18E+04 | -1.18E+04 | 1.18E+04 |
| L1 | -1.13E+04 | 1.13E+04 | -1.13E+04 | 1.13E+04 |
| L3 | -1.11E+04 | 1.11E+04 | -1.11E+04 | 1.11E+04 |
| L4 | -4.88E+04 | 5.03E+04 | -4.55E+04 | 4.68E+04 |
| NF | — | — | — | — |
| NS | -1.26E+04 | 1.26E+04 | -1.25E+04 | 1.24E+04 |




Data identically zero, insufficient, or not available from NFA.

Figure D–202. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–403. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -15.2 | 2.81E+04 | 5 | 108. | 46 |
| A2 | -171. | 2.17E+04 | 5 | 785. | -119 |
| FD | 62.3 | 3.05E+04 | 18 | 399. | 78 |
| L1 | -0.703 | 3.39E+04 | 36 | 4.52E-02 | -135 |
| L3 | 96.7 | 3.02E+04 | 42 | 187. | 28 |
| L4 | 89.8 | 3.92E+04 | 29 | 1.67E+03 | 114 |
| NF | — | — | — | — | — |
| NS | -0.807 | 3.78E+04 | 64 | 3.73 | -126 |

Table D–404. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.87E+04 | 2.89E+04 | -2.85E+04 | 2.79E+04 |
| A2 | -2.65E+04 | 2.61E+04 | -2.63E+04 | 2.57E+04 |
| FD | -2.98E+04 | 2.98E+04 | -2.97E+04 | 2.97E+04 |
| L1 | -3.39E+04 | 3.39E+04 | -3.38E+04 | 3.38E+04 |
| L3 | -3.13E+04 | 3.13E+04 | -3.12E+04 | 3.12E+04 |
| L4 | -5.08E+04 | 4.81E+04 | -4.61E+04 | 4.53E+04 |
| NF | — | — | — | — |
| NS | -3.90E+04 | 3.89E+04 | -3.84E+04 | 3.83E+04 |

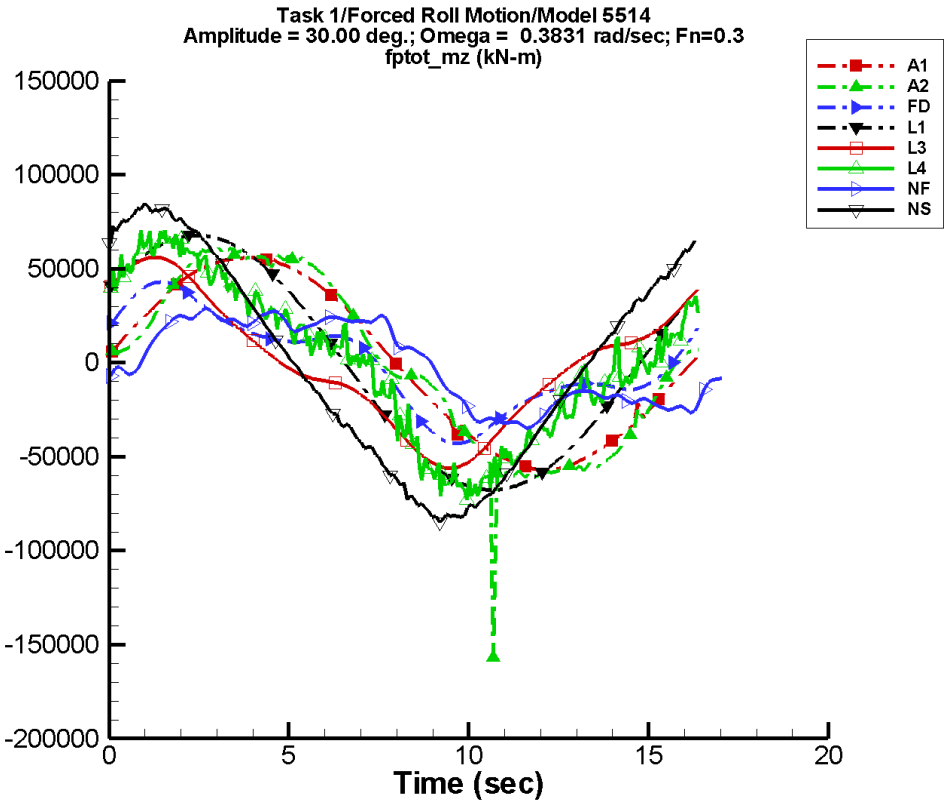



Figure D–203. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–405. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -30.3 | 5.61E+04 | 5 | 216. | 46 |
| A2 | -888. | 6.07E+04 | 4 | 998. | -166 |
| FD | 413. | 3.18E+04 | 37 | 2.70E+03 | 78 |
| L1 | -0.717 | 6.77E+04 | 36 | 0.138 | -142 |
| L3 | 663. | 4.60E+04 | 66 | 1.27E+03 | 31 |
| L4 | 1.42E+03 | 5.62E+04 | 43 | 1.83E+03 | 109 |
| NF | -867. | 2.83E+04 | 26 | 2.61E+03 | -93 |
| NS | -1.48 | 7.59E+04 | 65 | 9.25 | -132 |

Table D–406. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.73E+04 | 5.78E+04 | -5.70E+04 | 5.59E+04 |
| A2 | -1.57E+05 | 6.21E+04 | -6.92E+04 | 5.99E+04 |
| FD | -4.30E+04 | 4.30E+04 | -4.24E+04 | 4.24E+04 |
| L1 | -6.77E+04 | 6.77E+04 | -6.76E+04 | 6.76E+04 |
| L3 | -5.61E+04 | 5.61E+04 | -5.59E+04 | 5.59E+04 |
| L4 | -7.27E+04 | 7.09E+04 | -6.77E+04 | 6.57E+04 |
| NF | -3.46E+04 | 2.90E+04 | -3.27E+04 | 2.58E+04 |
| NS | -8.50E+04 | 8.48E+04 | -8.22E+04 | 8.20E+04 |

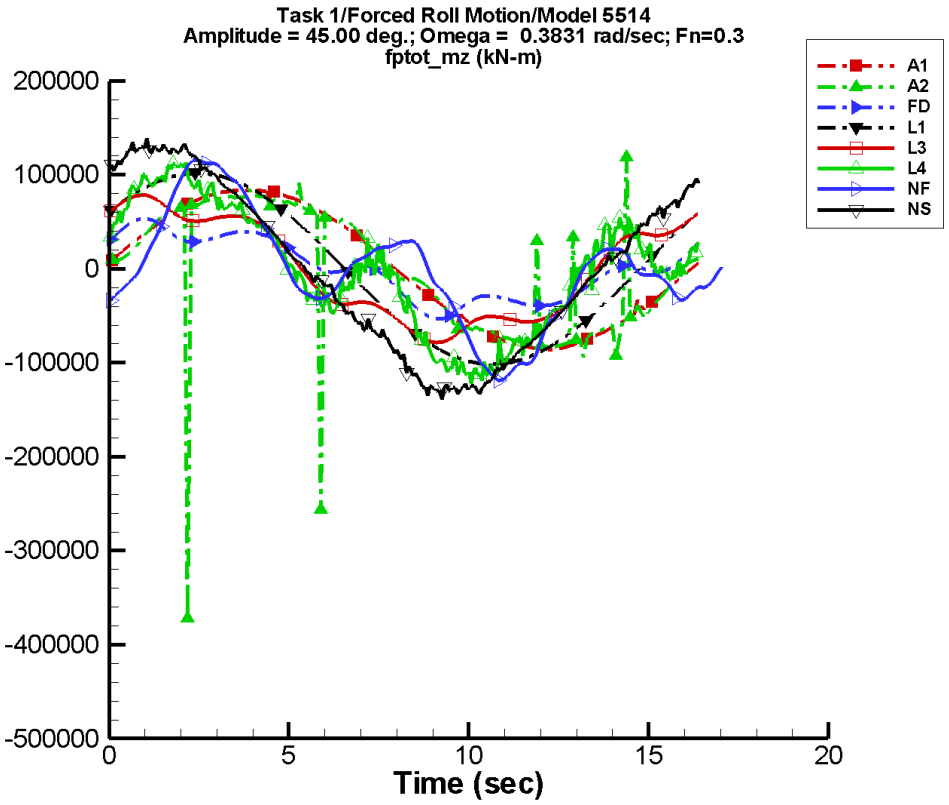



Figure D–204. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–407. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -45.5 | 8.42E+04 | 5 | 324. | 46 |
| A2 | -1.69E+03 | 7.33E+04 | 7 | 926. | -144 |
| FD | 200. | 4.19E+04 | 41 | 1.08E+03 | 84 |
| L1 | -0.803 | 1.02E+05 | 36 | 0.137 | -121 |
| L3 | 11.1 | 7.05E+04 | 60 | 741. | 119 |
| L4 | 576. | 8.37E+04 | 50 | 1.57E+03 | 154 |
| NF | -2.04E+03 | 5.77E+04 | 58 | 7.01E+03 | -32 |
| NS | 6.52 | 1.21E+05 | 59 | 30.1 | -124 |

Table D–408. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.60E+04 | 8.67E+04 | -8.54E+04 | 8.38E+04 |
| A2 | -3.72E+05 | 1.19E+05 | -7.49E+04 | 7.97E+04 |
| FD | -5.32E+04 | 5.32E+04 | -5.14E+04 | 5.15E+04 |
| L1 | -1.02E+05 | 1.02E+05 | -1.01E+05 | 1.01E+05 |
| L3 | -7.84E+04 | 7.84E+04 | -7.79E+04 | 7.79E+04 |
| L4 | -1.23E+05 | 1.20E+05 | -1.12E+05 | 1.09E+05 |
| NF | -1.19E+05 | 1.16E+05 | -1.12E+05 | 1.12E+05 |
| NS | -1.39E+05 | 1.39E+05 | -1.29E+05 | 1.29E+05 |

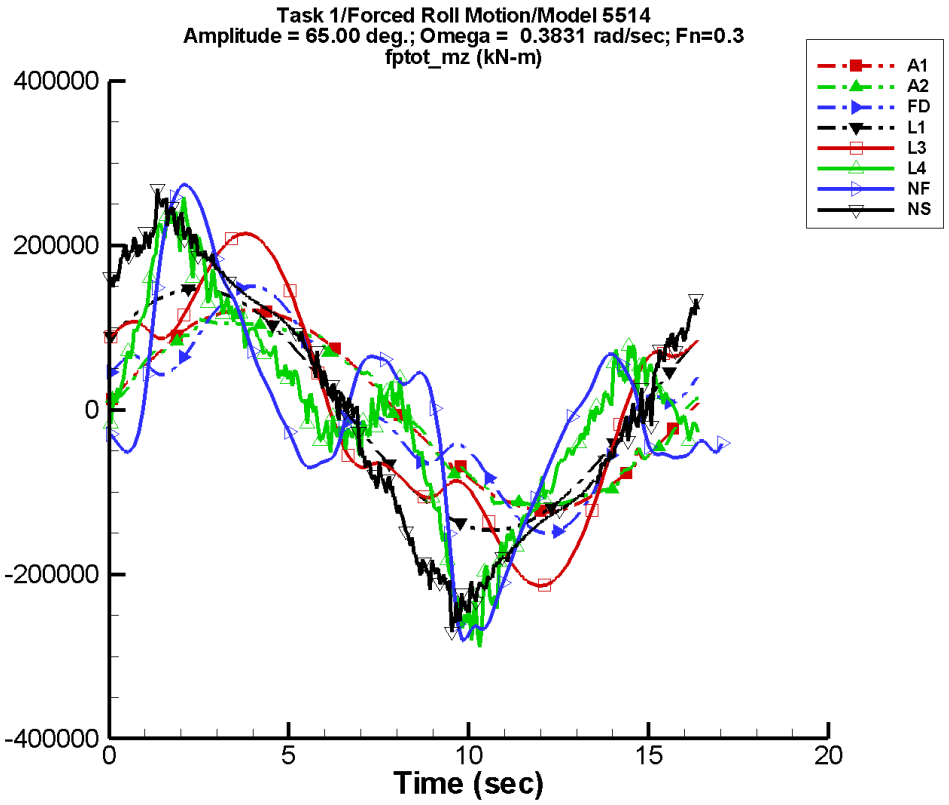


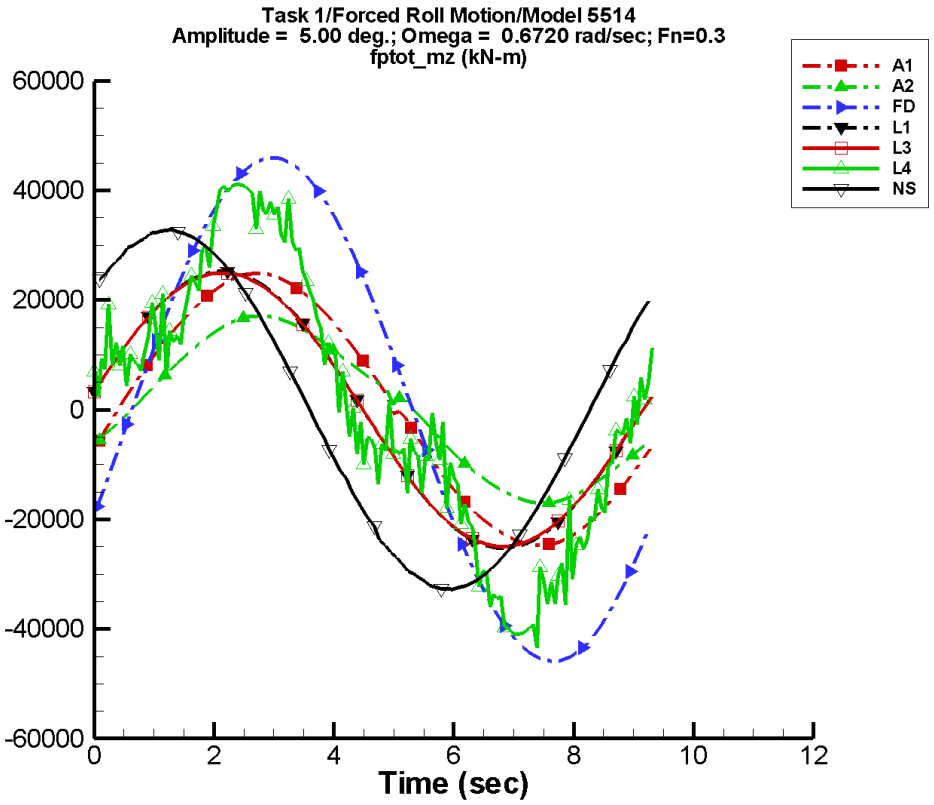

Figure D–205. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–409. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -65.7 | 1.22E+05 | 5 | 467. | 46 |
| A2 | -2.31E+03 | 1.15E+05 | 5 | 3.43E+03 | 73 |
| FD | -503. | 1.16E+05 | 17 | 6.53E+03 | -117 |
| L1 | -0.954 | 1.47E+05 | 36 | 0.280 | -114 |
| L3 | -3.09E+03 | 1.67E+05 | 29 | 6.21E+03 | -164 |
| L4 | 596. | 1.52E+05 | 41 | 5.61E+03 | -119 |
| NF | -2.79E+03 | 1.17E+05 | 68 | 1.66E+04 | -16 |
| NS | 651. | 2.07E+05 | 42 | 644. | -79 |

Table D–410. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.24E+05 | 1.25E+05 | -1.23E+05 | 1.21E+05 |
| A2 | -1.17E+05 | 1.10E+05 | -1.16E+05 | 1.06E+05 |
| FD | -1.50E+05 | 1.50E+05 | -1.49E+05 | 1.49E+05 |
| L1 | -1.47E+05 | 1.47E+05 | -1.47E+05 | 1.47E+05 |
| L3 | -2.14E+05 | 2.14E+05 | -2.13E+05 | 2.13E+05 |
| L4 | -2.89E+05 | 2.58E+05 | -2.58E+05 | 2.30E+05 |
| NF | -2.81E+05 | 2.98E+05 | -2.68E+05 | 2.62E+05 |
| NS | -2.70E+05 | 2.69E+05 | -2.48E+05 | 2.52E+05 |




Data identically zero, insufficient, or not available from NFA.

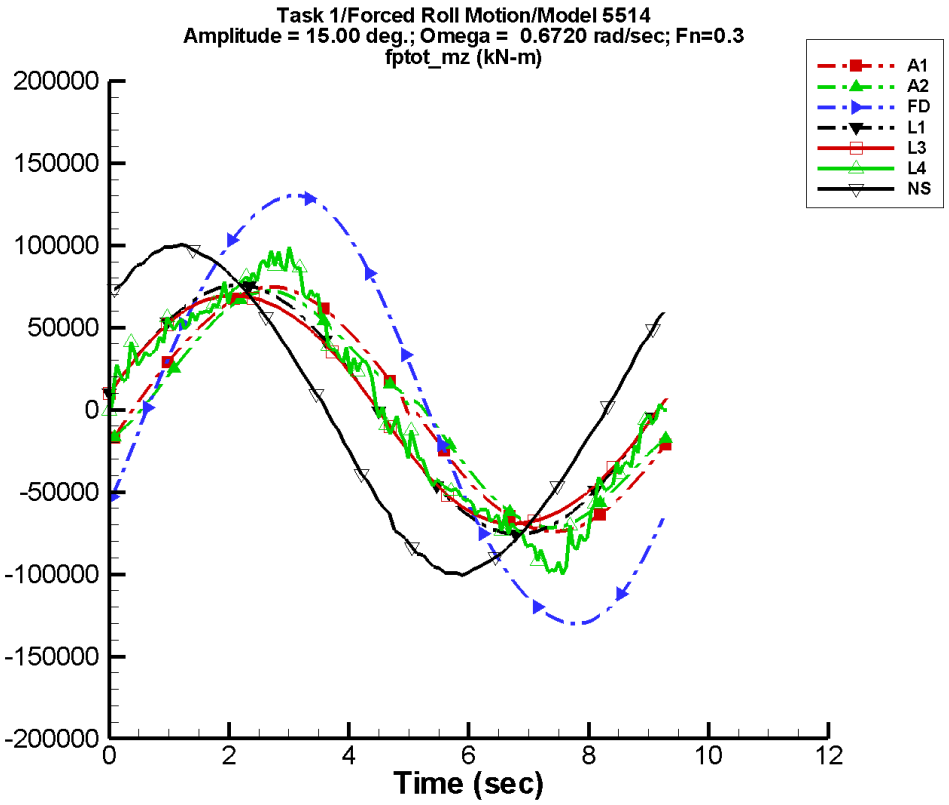
Figure D–206. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–411. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -20.3 | 2.46E+04 | -15 | 67.5 | -88 |
| A2 | -63.0 | 1.63E+04 | -21 | 148. | -120 |
| FD | 2.95 | 4.59E+04 | -25 | 5.92 | 137 |
| L1 | -0.638 | 2.52E+04 | 7 | 0.252 | -148 |
| L3 | 2.38 | 2.50E+04 | 7 | 7.48 | 38 |
| L4 | 13.3 | 3.11E+04 | -2 | 1.14E+03 | 161 |
| NF | — | — | — | — | — |
| NS | -1.80 | 3.26E+04 | 42 | 5.07 | -144 |

Table D–412. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.47E+04 | 2.49E+04 | -2.44E+04 | 2.45E+04 |
| A2 | -1.70E+04 | 1.71E+04 | -1.67E+04 | 1.68E+04 |
| FD | -4.59E+04 | 4.59E+04 | -4.54E+04 | 4.54E+04 |
| L1 | -2.52E+04 | 2.52E+04 | -2.51E+04 | 2.51E+04 |
| L3 | -2.49E+04 | 2.49E+04 | -2.49E+04 | 2.49E+04 |
| L4 | -4.34E+04 | 4.11E+04 | -4.01E+04 | 4.06E+04 |
| NF | — | — | — | — |
| NS | -3.29E+04 | 3.28E+04 | -3.24E+04 | 3.24E+04 |




Data identically zero, insufficient, or not available from NFA.

Figure D–207. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–413. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -60.9 | 7.36E+04 | -15 | 202. | -88 |
| A2 | -350. | 6.72E+04 | -16 | 792. | -128 |
| FD | 192. | 1.31E+05 | -26 | 387. | 137 |
| L1 | -0.644 | 7.57E+04 | 7 | 0.308 | -166 |
| L3 | 100. | 7.09E+04 | 8 | 193. | 24 |
| L4 | 401. | 8.08E+04 | 1 | 2.81E+03 | 125 |
| NF | — | — | — | — | — |
| NS | -5.50 | 9.75E+04 | 42 | 9.15 | -172 |

Table D–414. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.42E+04 | 7.46E+04 | -7.32E+04 | 7.36E+04 |
| A2 | -7.17E+04 | 7.22E+04 | -7.05E+04 | 7.10E+04 |
| FD | -1.30E+05 | 1.30E+05 | -1.29E+05 | 1.29E+05 |
| L1 | -7.57E+04 | 7.57E+04 | -7.54E+04 | 7.54E+04 |
| L3 | -6.94E+04 | 6.94E+04 | -6.91E+04 | 6.91E+04 |
| L4 | -1.00E+05 | 9.89E+04 | -9.38E+04 | 9.08E+04 |
| NF | — | — | — | — |
| NS | -1.01E+05 | 1.01E+05 | -9.84E+04 | 9.84E+04 |

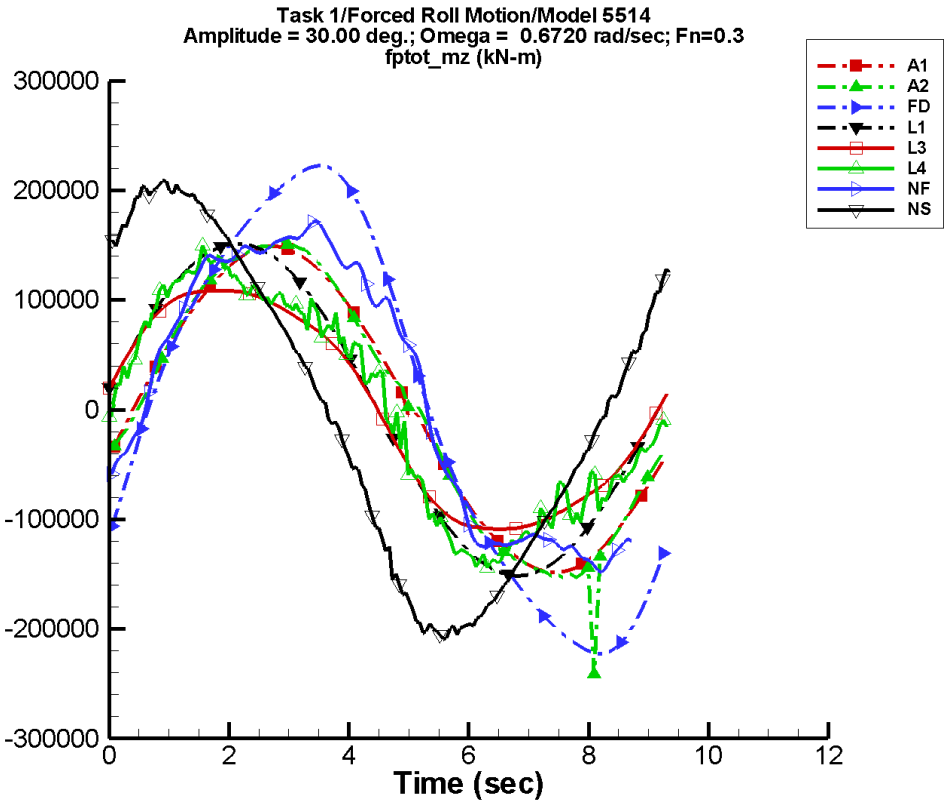



Figure D–208. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–415. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -122. | 1.47E+05 | -15 | 405. | -88 |
| A2 | -1.53E+03 | 1.53E+05 | -15 | 2.12E+03 | -22 |
| FD | 1.31E+03 | 2.18E+05 | -30 | 2.76E+03 | 133 |
| L1 | -0.678 | 1.51E+05 | 7 | 0.714 | -177 |
| L3 | 638. | 1.16E+05 | 11 | 1.25E+03 | 31 |
| L4 | 1.39E+03 | 1.32E+05 | 8 | 1.95E+03 | -114 |
| NF | -5.18E+03 | 1.41E+05 | -78 | 1.89E+03 | -30 |
| NS | -10.8 | 1.94E+05 | 44 | 5.62 | -163 |

Table D–416. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.48E+05 | 1.49E+05 | -1.46E+05 | 1.47E+05 |
| A2 | -2.41E+05 | 1.54E+05 | -1.57E+05 | 1.50E+05 |
| FD | -2.23E+05 | 2.23E+05 | -2.19E+05 | 2.19E+05 |
| L1 | -1.51E+05 | 1.51E+05 | -1.51E+05 | 1.51E+05 |
| L3 | -1.09E+05 | 1.09E+05 | -1.09E+05 | 1.09E+05 |
| L4 | -1.44E+05 | 1.51E+05 | -1.38E+05 | 1.45E+05 |
| NF | -1.48E+05 | 1.28E+05 | -1.41E+05 | 1.23E+05 |
| NS | -2.09E+05 | 2.09E+05 | -2.03E+05 | 2.03E+05 |

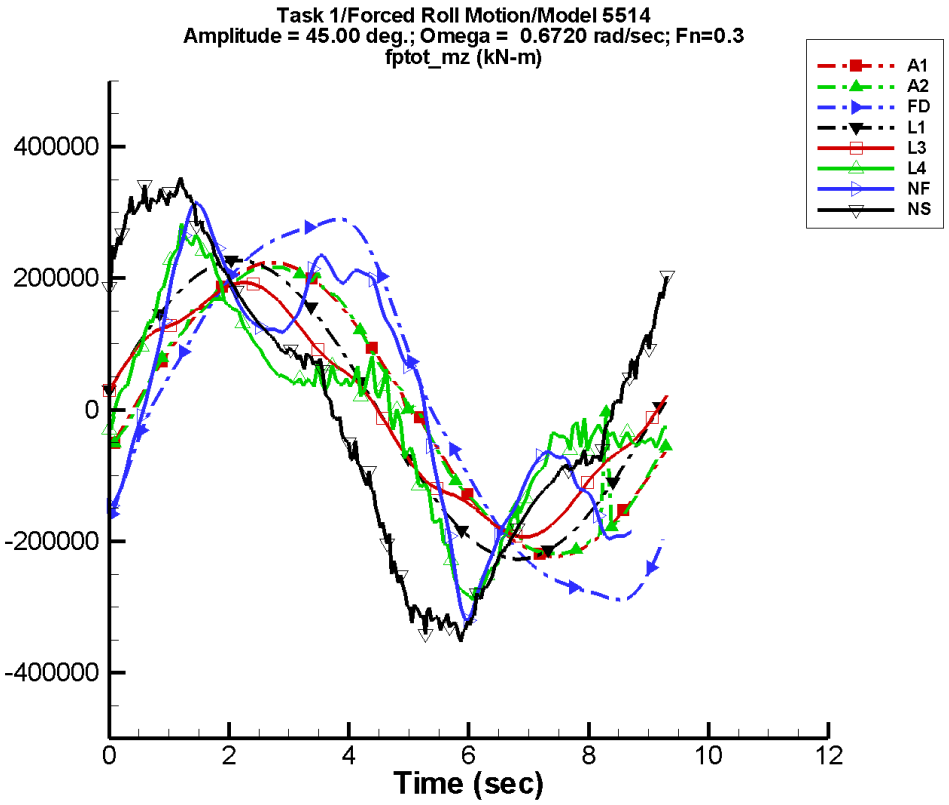



Figure D–209. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–417. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -183. | 2.21E+05 | -15 | 607. | -88 |
| A2 | 1.92E+03 | 2.15E+05 | -15 | 3.20E+03 | -167 |
| FD | 1.37E+03 | 2.91E+05 | -32 | 4.14E+03 | 109 |
| L1 | -0.774 | 2.27E+05 | 7 | 1.20 | 179 |
| L3 | -240. | 1.80E+05 | 10 | 1.30E+03 | 130 |
| L4 | 333. | 1.80E+05 | 23 | 8.06E+03 | -64 |
| NF | -1.16E+04 | 1.84E+05 | -67 | 6.90E+03 | 68 |
| NS | -2.75 | 2.91E+05 | 45 | 61.9 | -30 |

Table D–418. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.23E+05 | 2.24E+05 | -2.20E+05 | 2.21E+05 |
| A2 | -2.19E+05 | 2.17E+05 | -2.17E+05 | 2.14E+05 |
| FD | -2.90E+05 | 2.90E+05 | -2.85E+05 | 2.85E+05 |
| L1 | -2.27E+05 | 2.27E+05 | -2.26E+05 | 2.26E+05 |
| L3 | -1.93E+05 | 1.93E+05 | -1.92E+05 | 1.92E+05 |
| L4 | -2.90E+05 | 2.90E+05 | -2.76E+05 | 2.60E+05 |
| NF | -3.20E+05 | 2.70E+05 | -2.88E+05 | 2.49E+05 |
| NS | -3.53E+05 | 3.53E+05 | -3.34E+05 | 3.34E+05 |

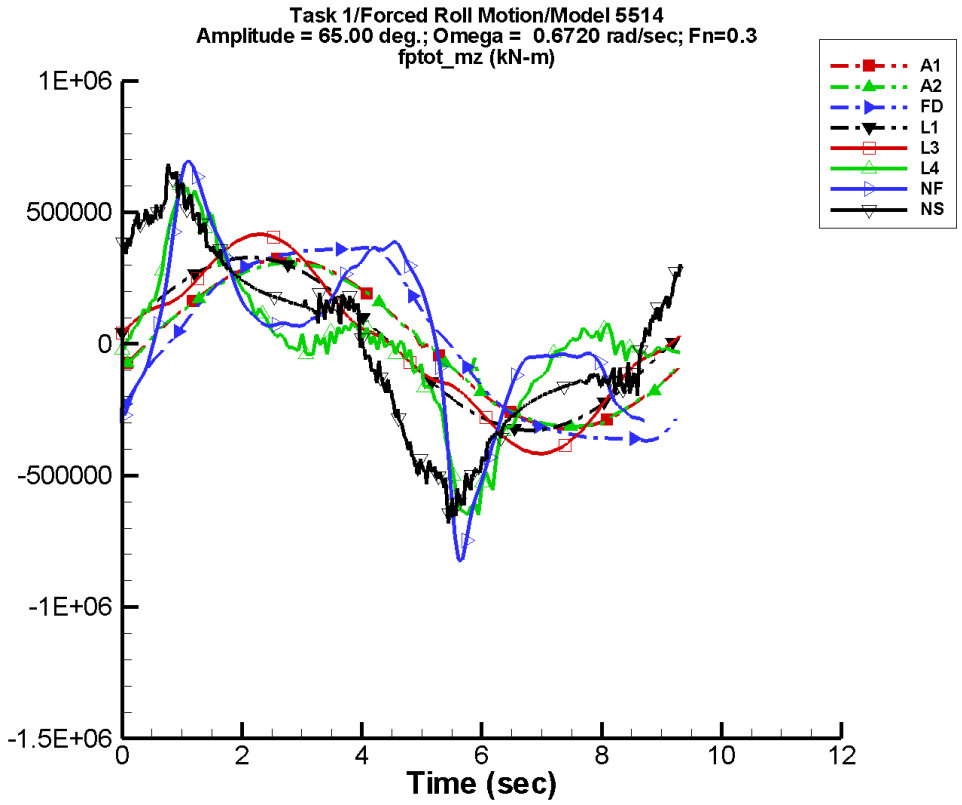


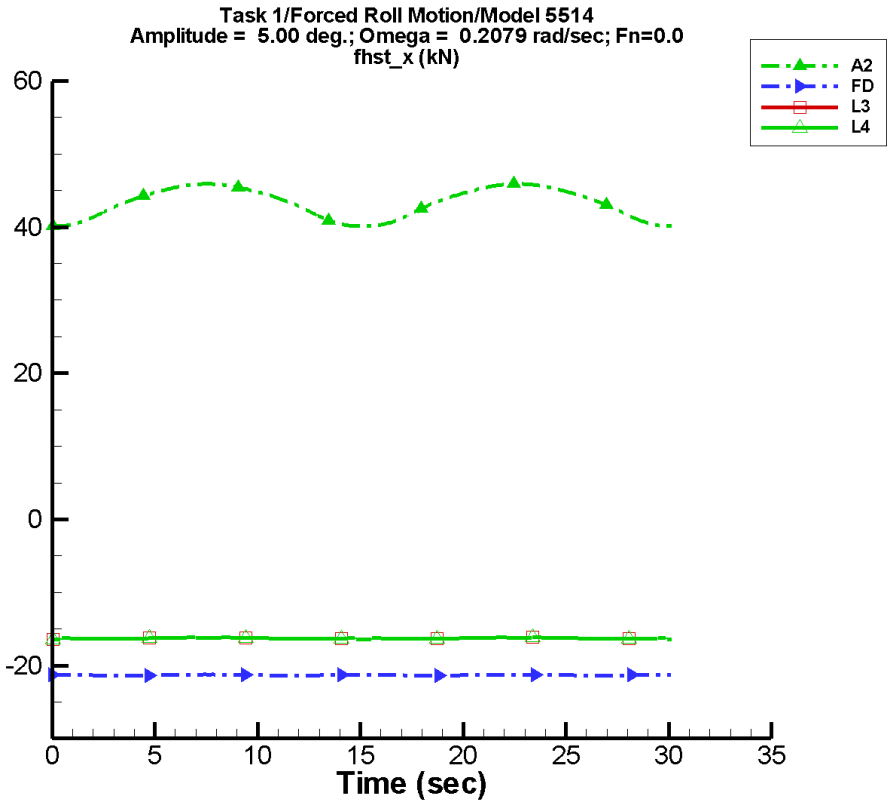

Figure D–210. Time history of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–419. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -264. | 3.19E+05 | -15 | 877. | -88 |
| A2 | -1.19E+03 | 3.11E+05 | -15 | 3.36E+03 | 29 |
| FD | 558. | 3.93E+05 | -32 | 6.11E+03 | 82 |
| L1 | -1.01 | 3.28E+05 | 7 | 1.70 | -180 |
| L3 | -3.27E+03 | 3.54E+05 | 6 | 6.56E+03 | -168 |
| L4 | 5.62E+03 | 3.20E+05 | 38 | 2.13E+04 | -55 |
| NF | -8.27E+03 | 2.72E+05 | -50 | 2.02E+04 | 17 |
| NS | 483. | 4.29E+05 | 42 | 595. | -91 |

Table D–420. Minimum and maximum of of $M_z^{\text{ptot}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.21E+05 | 3.23E+05 | -3.17E+05 | 3.19E+05 |
| A2 | -3.15E+05 | 3.07E+05 | -3.12E+05 | 3.04E+05 |
| FD | -3.67E+05 | 3.67E+05 | -3.63E+05 | 3.63E+05 |
| L1 | -3.28E+05 | 3.28E+05 | -3.27E+05 | 3.27E+05 |
| L3 | -4.17E+05 | 4.17E+05 | -4.13E+05 | 4.13E+05 |
| L4 | -6.51E+05 | 6.05E+05 | -6.10E+05 | 5.64E+05 |
| NF | -8.24E+05 | 8.06E+05 | -7.07E+05 | 6.84E+05 |
| NS | -6.81E+05 | 6.84E+05 | -6.28E+05 | 6.39E+05 |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

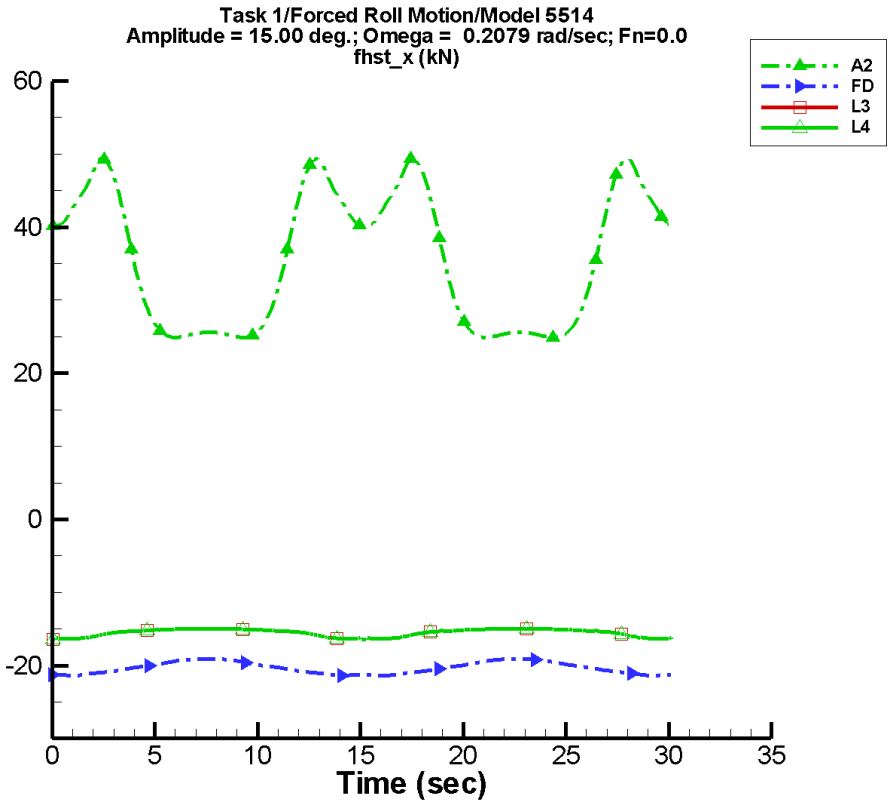
Figure D–211. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–421. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 43.3 | 5.02E-03 | 16 | 2.86 | -90 |
| FD | -21.3 | 1.25E-03 | -169 | 2.19E-02 | -105 |
| L1 | — | — | — | — | — |
| L3 | -16.3 | 1.95E-03 | 118 | 7.61E-02 | -91 |
| L4 | -16.3 | 1.95E-03 | 118 | 7.61E-02 | -91 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–422. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | — | — | — | — |
| L3 | -16.4 | -16.1 | -16.4 | -16.2 |
| L4 | -16.4 | -16.1 | -16.4 | -16.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

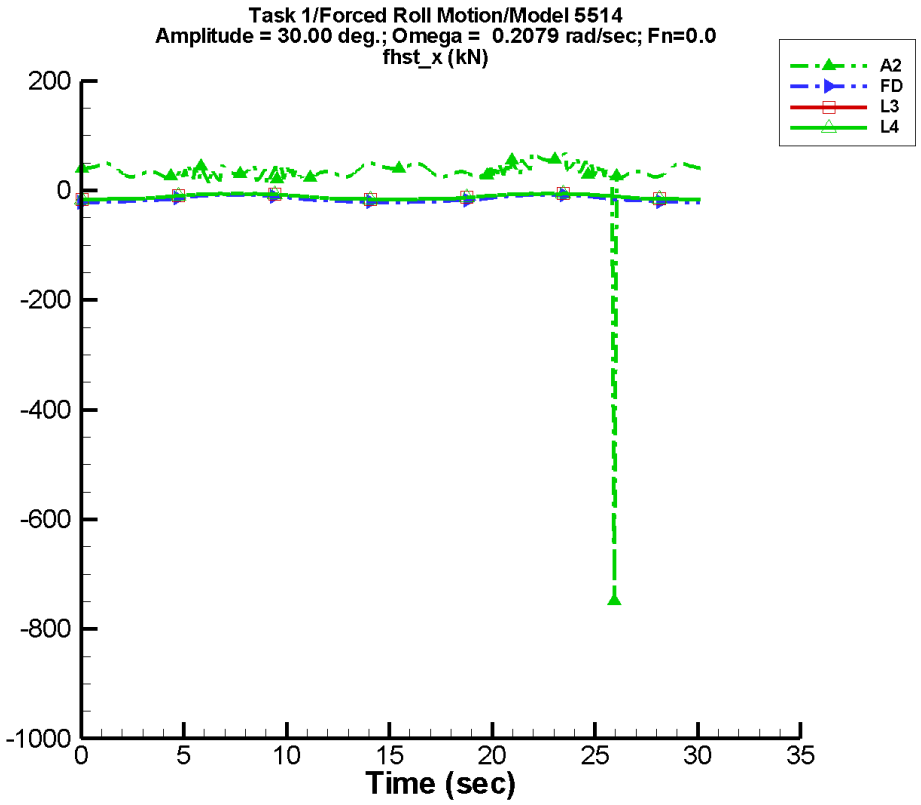
Figure D–212. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–423. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 35.6 | 6.87E-02 | -59 | 11.7 | 87 |
| FD | -20.3 | 3.06E-03 | -170 | 1.12 | -91 |
| L1 | — | — | — | — | — |
| L3 | -15.5 | 1.48E-02 | -61 | 0.682 | -92 |
| L4 | -15.5 | 1.48E-02 | -61 | 0.682 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–424. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 24.9 | 49.4 | 24.9 | 48.9 |
| FD | -21.4 | -19.1 | -21.4 | -19.1 |
| L1 | — | — | — | — |
| L3 | -16.4 | -15.0 | -16.4 | -15.0 |
| L4 | -16.4 | -15.0 | -16.4 | -15.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

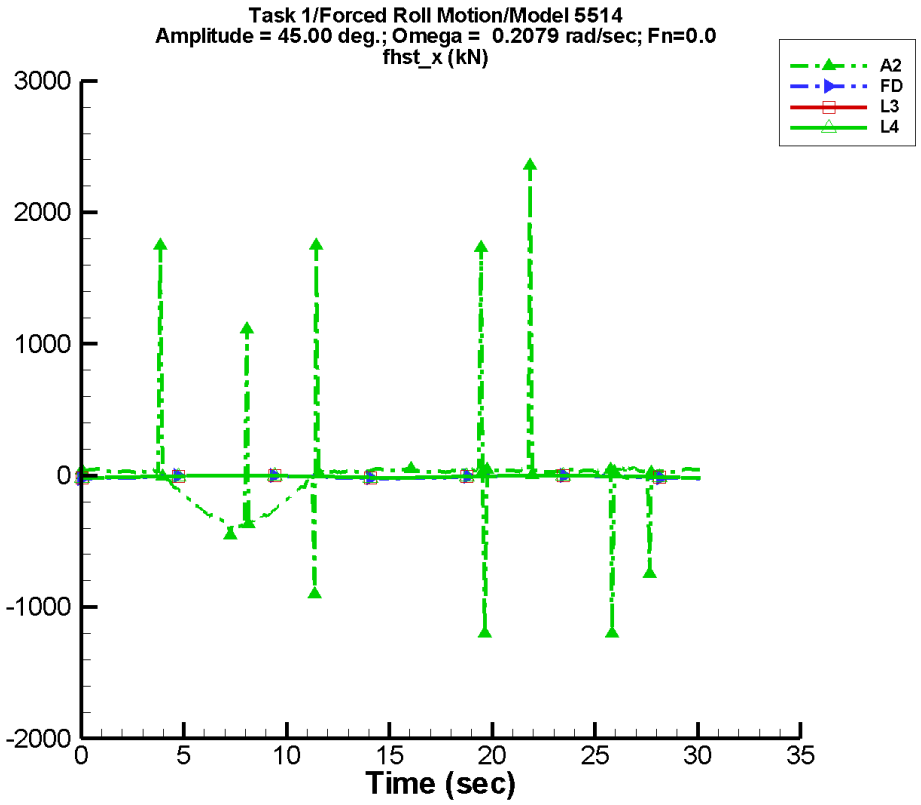
Figure D–213. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–425. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 33.7 | 3.43 | -123 | 5.03 | 23 |
| FD | -15.6 | 2.05E-02 | -171 | 6.73 | -91 |
| L1 | — | — | — | — | — |
| L3 | -11.6 | 5.98E-02 | 118 | 5.53 | -91 |
| L4 | -11.6 | 5.98E-02 | 118 | 5.53 | -91 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–426. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -748. | 69.2 | -77.4 | 58.6 |
| FD | -21.4 | -7.97 | -21.3 | -8.00 |
| L1 | — | — | — | — |
| L3 | -16.4 | -5.86 | -16.4 | -5.97 |
| L4 | -16.4 | -5.86 | -16.4 | -5.97 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

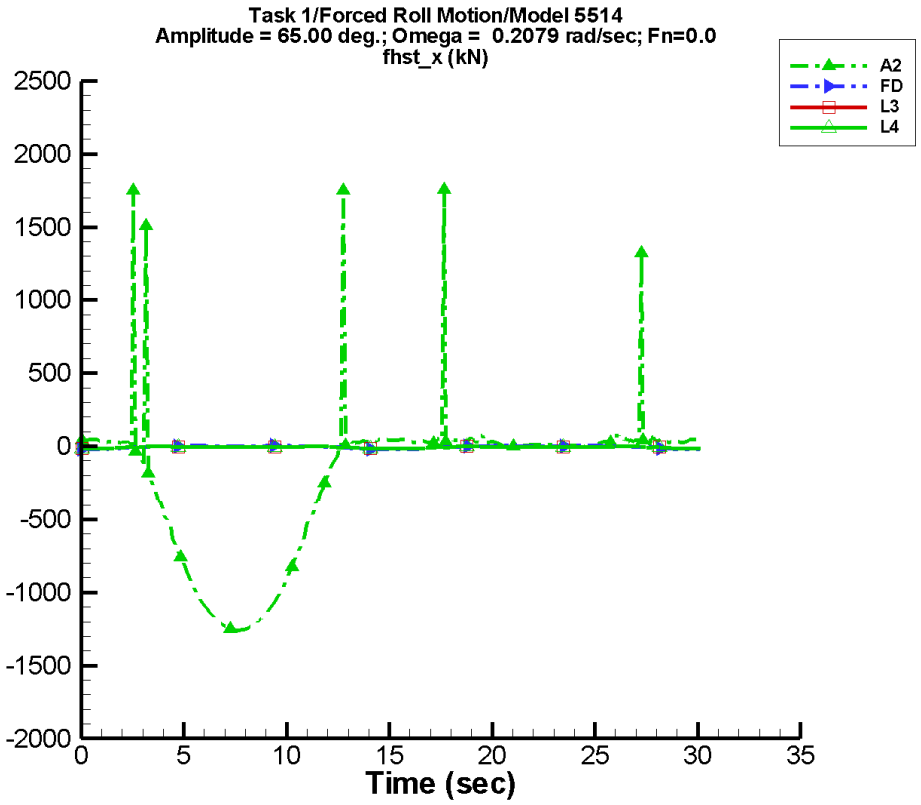
Figure D–214. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–427. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -16.4 | 119. | -177 | 96.3 | 70 |
| FD | -9.65 | 2.29E-02 | 15 | 11.2 | -89 |
| L1 | — | — | — | — | — |
| L3 | -7.52 | 3.70E-02 | -24 | 8.48 | -92 |
| L4 | -7.52 | 3.70E-02 | -24 | 8.48 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–428. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.20E+03 | 2.36E+03 | -391. | 349. |
| FD | -21.4 | 0.541 | -21.4 | 0.514 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.04 | -16.3 | 0.532 |
| L4 | -16.4 | 1.04 | -16.3 | 0.532 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

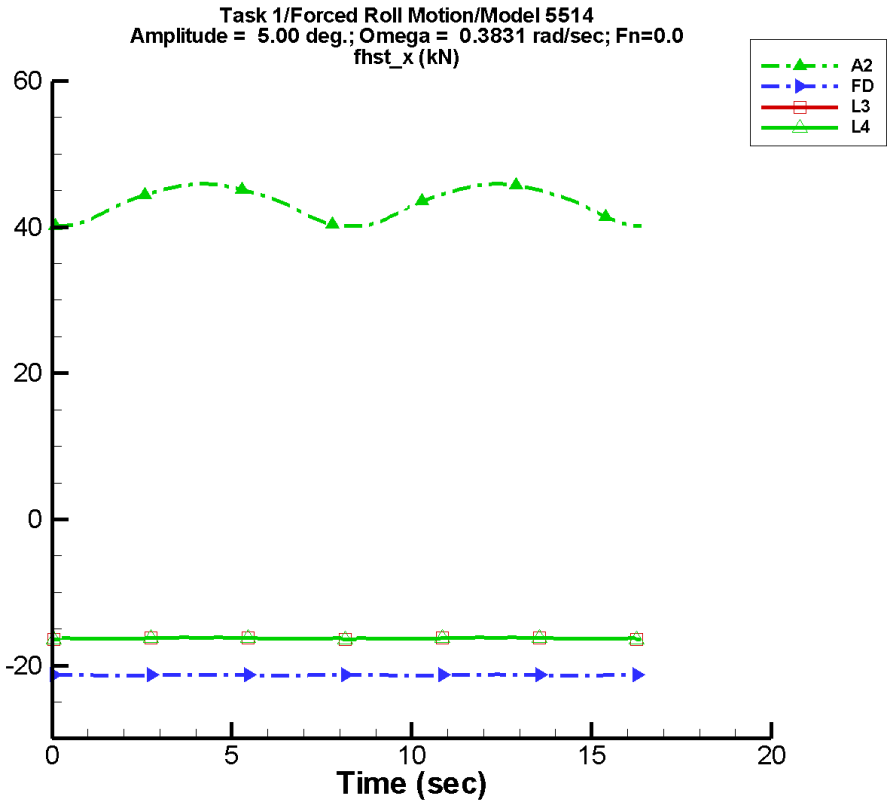
Figure D–215. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–429. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -212. | 475. | 177 | 402. | 84 |
| FD | -5.09 | 0.114 | 5 | 11.8 | -88 |
| L1 | — | — | — | — | — |
| L3 | -7.22 | 0.379 | -60 | 3.74 | -92 |
| L4 | -7.22 | 0.379 | -60 | 3.74 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–430. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.26E+03 | 1.76E+03 | -1.26E+03 | 263. |
| FD | -21.4 | 4.06 | -21.3 | 3.87 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.03 | -16.3 | 8.06E-02 |
| L4 | -16.4 | 1.03 | -16.3 | 8.06E-02 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

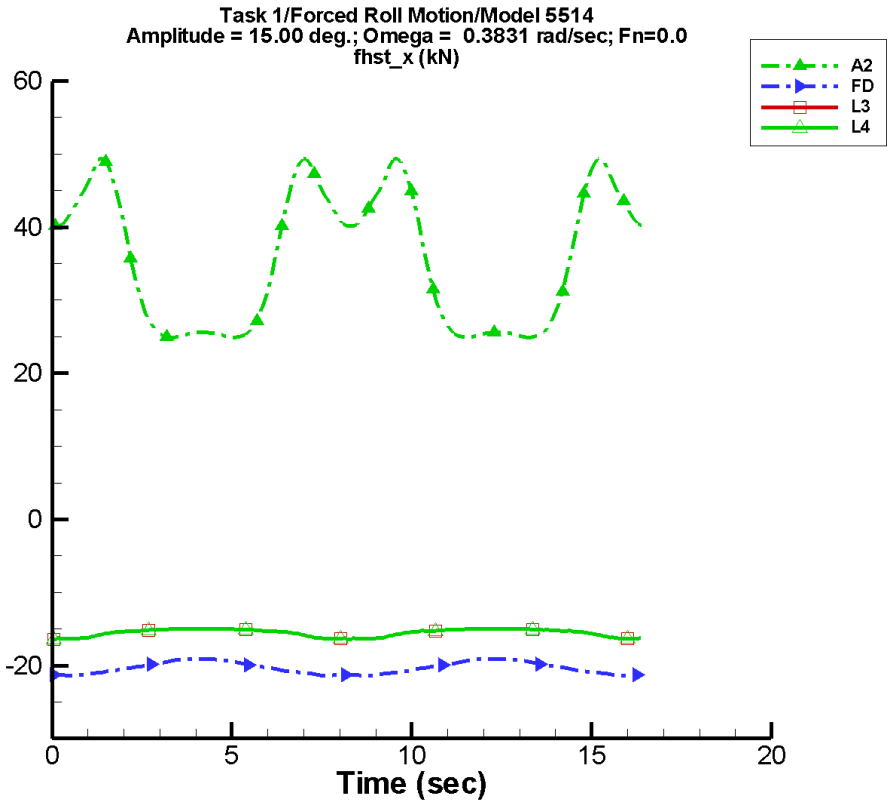
Figure D–216. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–431. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 43.3 | 5.33E-03 | 9 | 2.86 | -94 |
| FD | -21.3 | 3.24E-03 | 117 | 2.62E-02 | -93 |
| L1 | — | — | — | — | — |
| L3 | -16.3 | 1.45E-03 | -156 | 7.33E-02 | -93 |
| L4 | -16.3 | 1.45E-03 | -156 | 7.33E-02 | -93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–432. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | — | — | — | — |
| L3 | -16.4 | -16.1 | -16.4 | -16.2 |
| L4 | -16.4 | -16.1 | -16.4 | -16.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

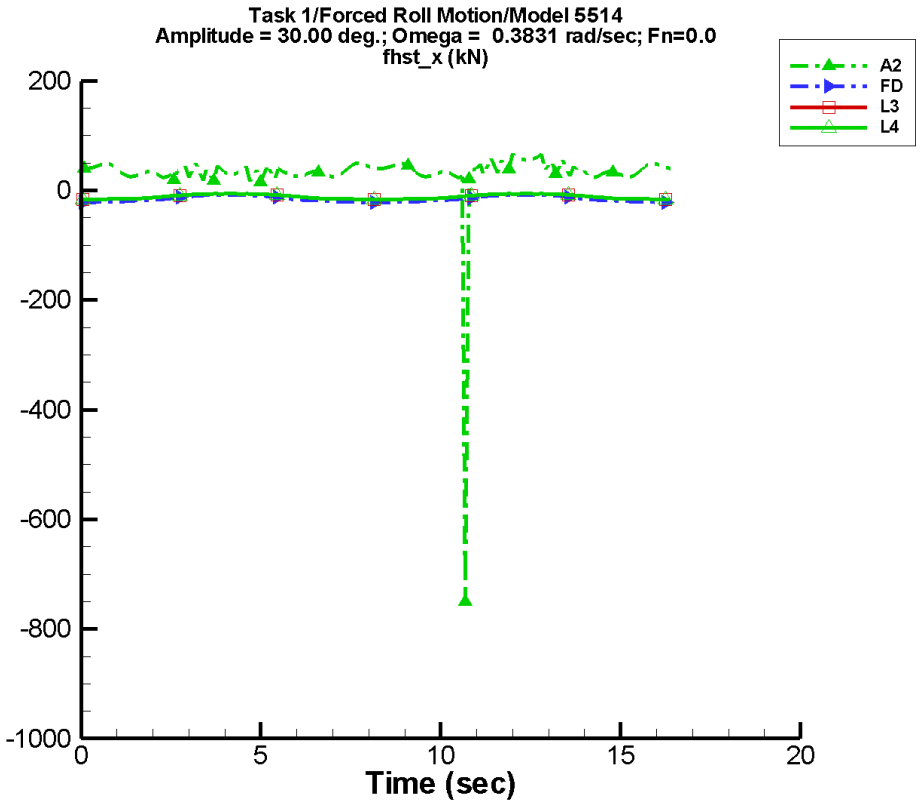
Figure D–217. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–433. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 35.6 | 8.01E-02 | -54 | 11.7 | 85 |
| FD | -20.3 | 5.43E-03 | 123 | 1.13 | -90 |
| L1 | — | — | — | — | — |
| L3 | -15.5 | 8.10E-03 | 10 | 0.707 | -92 |
| L4 | -15.5 | 8.10E-03 | 10 | 0.707 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–434. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 24.9 | 49.4 | 25.1 | 47.9 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | — | — | — | — |
| L3 | -16.4 | -15.0 | -16.4 | -15.0 |
| L4 | -16.4 | -15.0 | -16.4 | -15.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

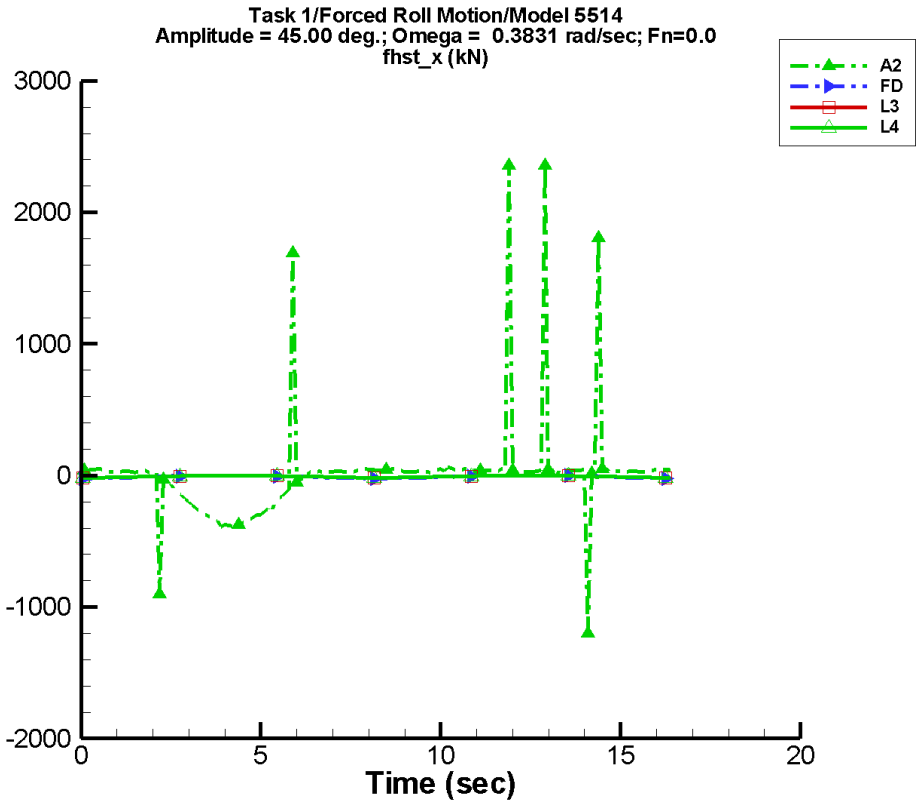
Figure D–218. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–435. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 32.3 | 6.83 | 65 | 8.86 | 161 |
| FD | -15.6 | 6.56E-02 | 122 | 6.81 | -90 |
| L1 | — | — | — | — | — |
| L3 | -11.5 | 3.94E-02 | -174 | 5.43 | -93 |
| L4 | -11.5 | 3.94E-02 | -174 | 5.43 | -93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–436. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -750. | 67.2 | -73.5 | 58.2 |
| FD | -21.4 | -7.97 | -21.3 | -8.09 |
| L1 | — | — | — | — |
| L3 | -16.4 | -5.88 | -16.4 | -6.04 |
| L4 | -16.4 | -5.88 | -16.4 | -6.04 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

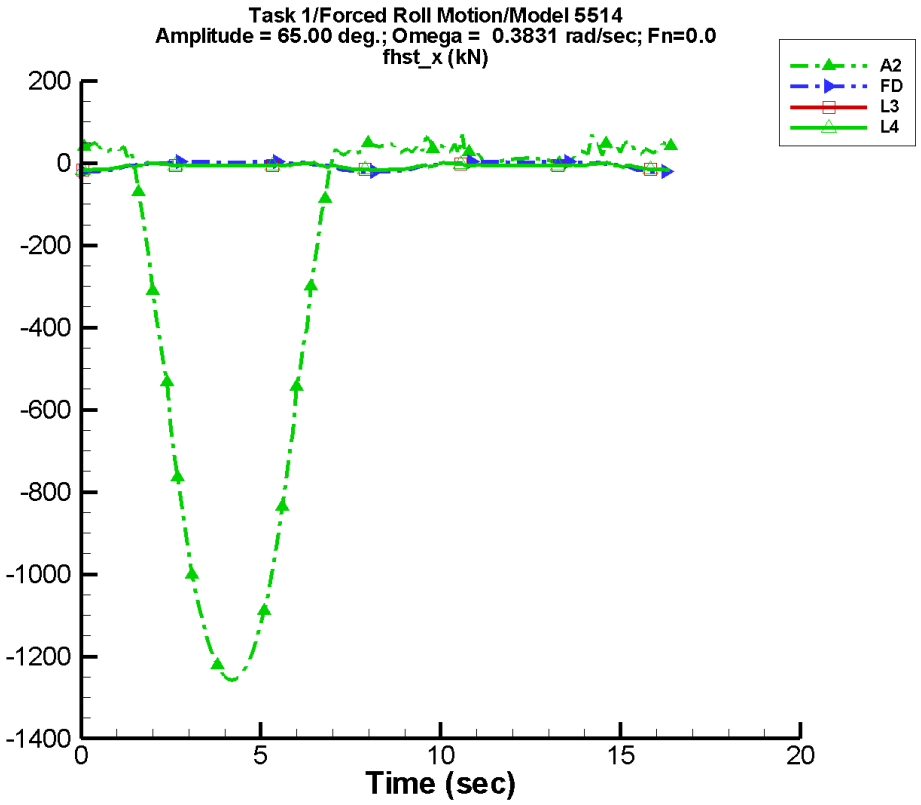
Figure D–219. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–437. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 12.0 | 173. | 178 | 65.6 | 103 |
| FD | -9.60 | 0.109 | -60 | 11.1 | -90 |
| L1 | — | — | — | — | — |
| L3 | -7.49 | 8.91E-02 | -14 | 8.56 | -92 |
| L4 | -7.49 | 8.91E-02 | -14 | 8.56 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–438. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.20E+03 | 2.36E+03 | -373. | 332. |
| FD | -21.4 | 0.539 | -21.3 | 0.472 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.03 | -16.4 | 0.366 |
| L4 | -16.4 | 1.03 | -16.4 | 0.366 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

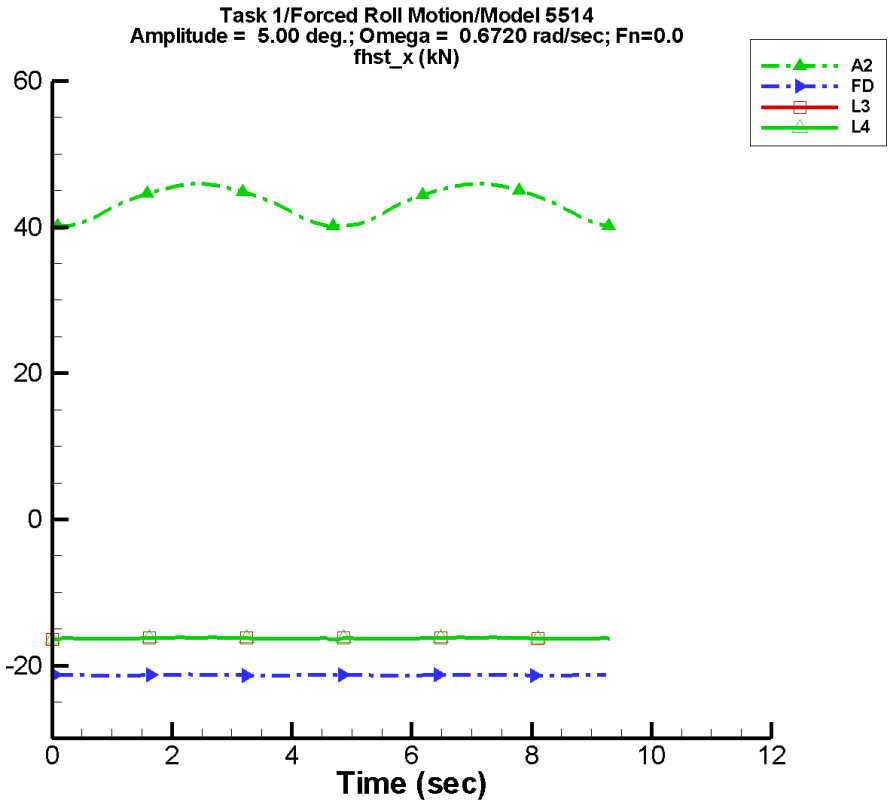
Figure D–220. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–439. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -234. | 478. | 176 | 384. | 83 |
| FD | -5.02 | 0.207 | -61 | 11.5 | -89 |
| L1 | — | — | — | — | — |
| L3 | -7.32 | 0.258 | -16 | 4.44 | -87 |
| L4 | -7.32 | 0.258 | -16 | 4.44 | -87 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–440. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.26E+03 | 70.2 | -1.25E+03 | 47.9 |
| FD | -21.4 | 4.05 | -21.2 | 3.38 |
| L1 | — | — | — | — |
| L3 | -16.4 | 0.639 | -16.4 | -0.378 |
| L4 | -16.4 | 0.639 | -16.4 | -0.378 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

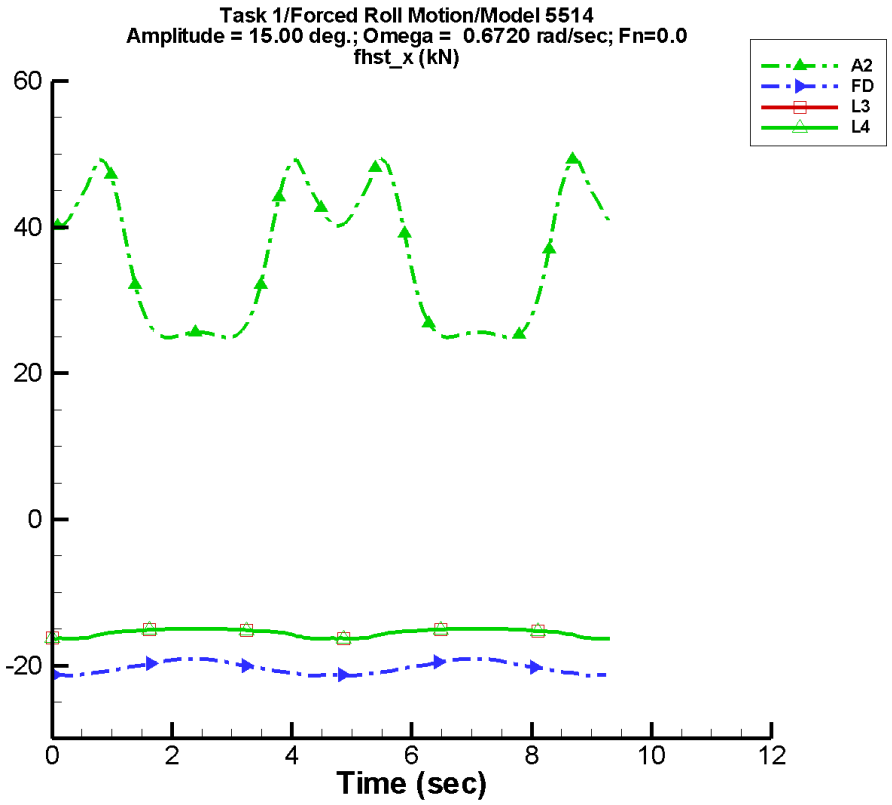
Figure D–221. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–441. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 43.3 | 2.01E-02 | -10 | 2.88 | -97 |
| FD | -21.3 | 4.63E-03 | 147 | 2.49E-02 | -103 |
| L1 | — | — | — | — | — |
| L3 | -16.3 | 2.54E-03 | -165 | 7.04E-02 | -96 |
| L4 | -16.3 | 2.54E-03 | -165 | 7.04E-02 | -96 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–442. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 40.2 | 45.9 | 40.2 | 45.8 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | — | — | — | — |
| L3 | -16.4 | -16.1 | -16.4 | -16.2 |
| L4 | -16.4 | -16.1 | -16.4 | -16.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

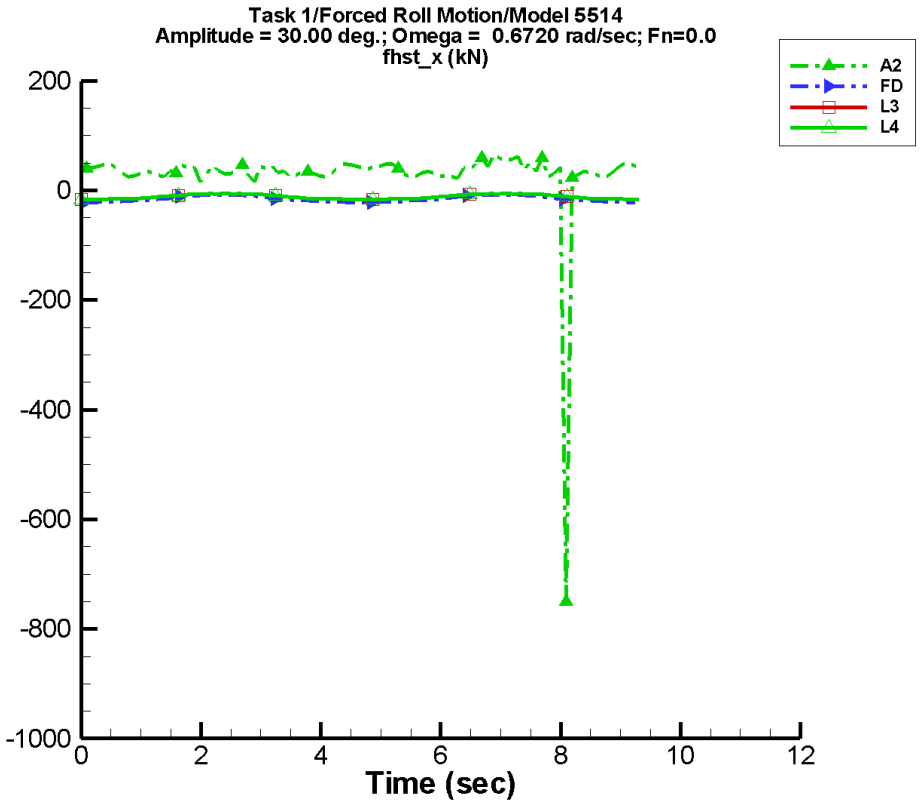
Figure D–222. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–443. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 35.6 | 9.48E-02 | -70 | 11.7 | 81 |
| FD | -20.3 | 1.00E-02 | 152 | 1.13 | -91 |
| L1 | — | — | — | — | — |
| L3 | -15.5 | 1.40E-02 | -3 | 0.707 | -93 |
| L4 | -15.5 | 1.40E-02 | -3 | 0.707 | -93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–444. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 24.9 | 49.4 | 25.1 | 46.0 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | — | — | — | — |
| L3 | -16.4 | -15.0 | -16.4 | -15.0 |
| L4 | -16.4 | -15.0 | -16.4 | -15.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

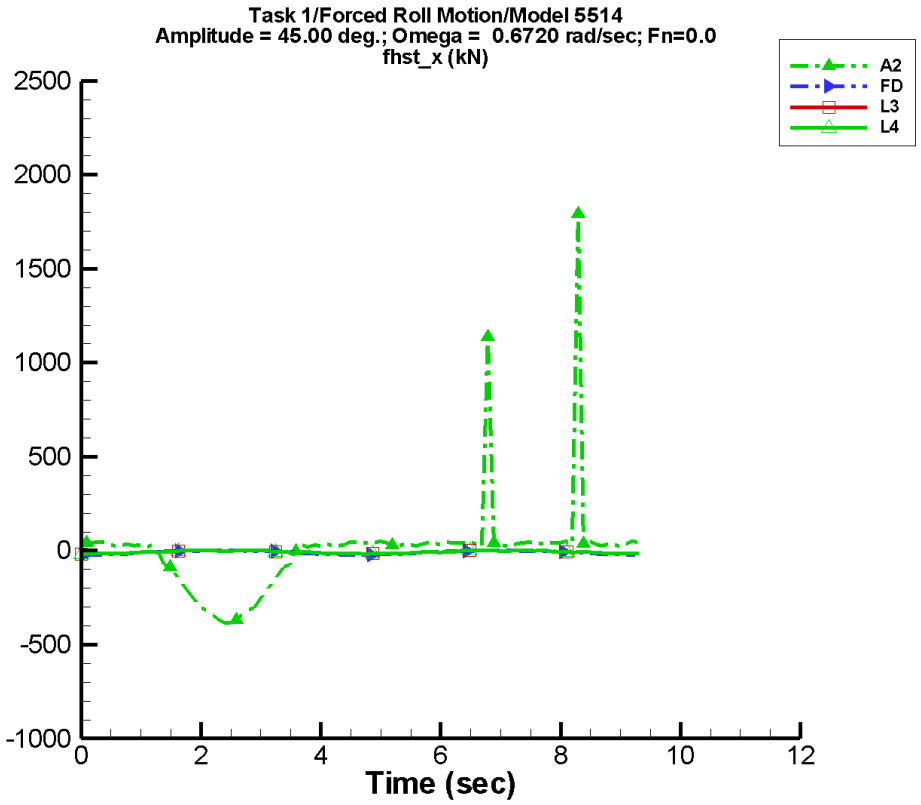
Figure D–223. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–445. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 28.5 | 12.7 | -56 | 15.1 | 12 |
| FD | -15.5 | 7.12E-02 | 150 | 6.78 | -91 |
| L1 | — | — | — | — | — |
| L3 | -11.5 | 5.00E-02 | -178 | 5.44 | -95 |
| L4 | -11.5 | 5.00E-02 | -178 | 5.44 | -95 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–446. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -749. | 66.4 | -71.6 | 62.8 |
| FD | -21.4 | -7.97 | -21.3 | -8.19 |
| L1 | — | — | — | — |
| L3 | -16.4 | -5.87 | -16.4 | -6.04 |
| L4 | -16.4 | -5.87 | -16.4 | -6.04 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

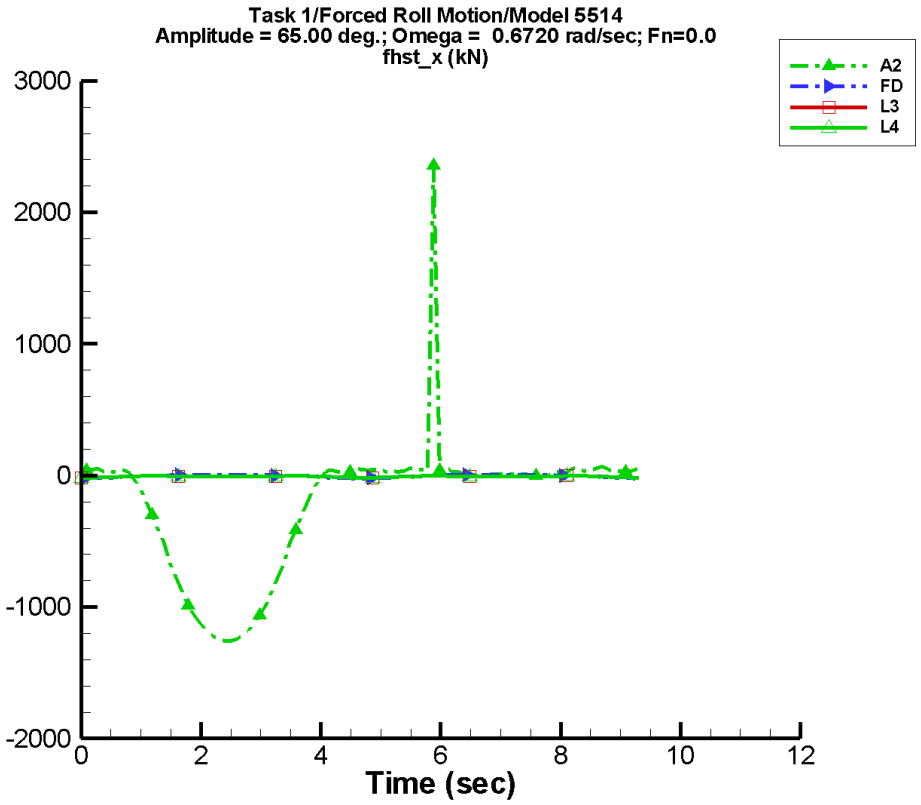
Figure D–224. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–447. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 5.47 | 169. | 166 | 79.8 | 93 |
| FD | -9.68 | 7.96E-02 | -31 | 11.2 | -89 |
| L1 | — | — | — | — | — |
| L3 | -7.53 | 4.56E-02 | -134 | 8.53 | -94 |
| L4 | -7.53 | 4.56E-02 | -134 | 8.53 | -94 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–448. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -383. | 1.79E+03 | -353. | 279. |
| FD | -21.4 | 0.538 | -21.2 | 0.365 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.03 | -16.3 | 0.227 |
| L4 | -16.4 | 1.03 | -16.3 | 0.227 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

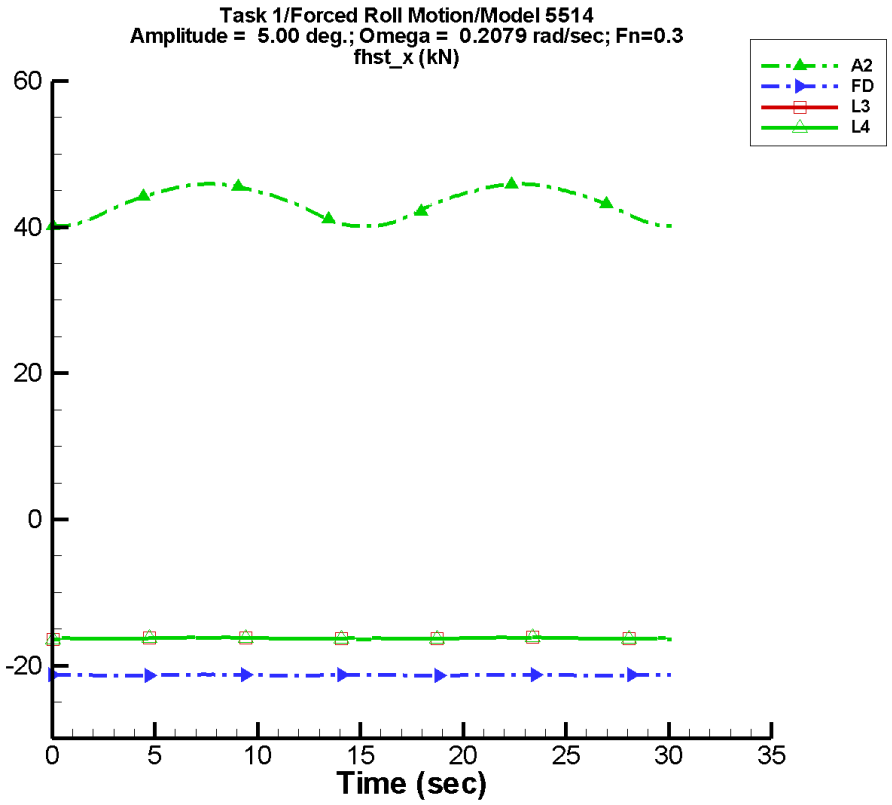
Figure D–225. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–449. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -203. | 501. | 179 | 379. | 72 |
| FD | -5.22 | 0.352 | -29 | 11.6 | -88 |
| L1 | — | — | — | — | — |
| L3 | -7.33 | 0.327 | 0 | 4.51 | -87 |
| L4 | -7.33 | 0.327 | 0 | 4.51 | -87 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–450. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.26E+03 | 2.36E+03 | -1.22E+03 | 349. |
| FD | -21.4 | 4.06 | -20.8 | 2.74 |
| L1 | — | — | — | — |
| L3 | -16.4 | 0.639 | -16.4 | -1.79 |
| L4 | -16.4 | 0.639 | -16.4 | -1.79 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

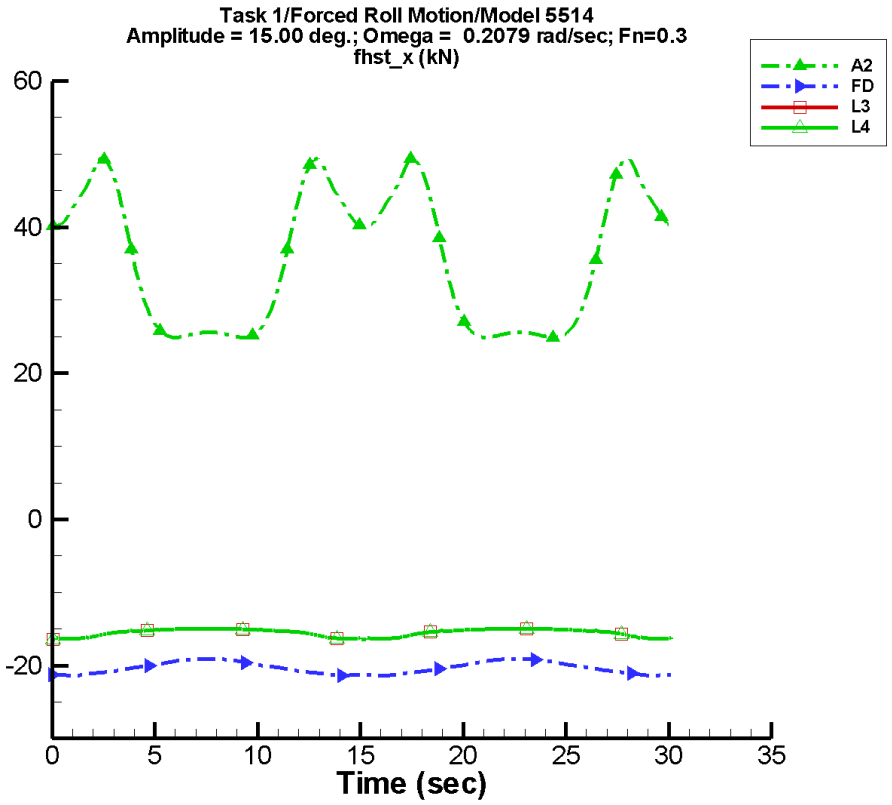
Figure D–226. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–451. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 43.3 | 5.98E-03 | 2 | 2.86 | -92 |
| FD | -21.3 | 1.22E-03 | -168 | 2.19E-02 | -105 |
| L1 | — | — | — | — | — |
| L3 | -16.3 | 1.98E-03 | 117 | 7.61E-02 | -91 |
| L4 | -16.3 | 1.98E-03 | 117 | 7.61E-02 | -91 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–452. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | — | — | — | — |
| L3 | -16.4 | -16.1 | -16.4 | -16.2 |
| L4 | -16.4 | -16.1 | -16.4 | -16.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

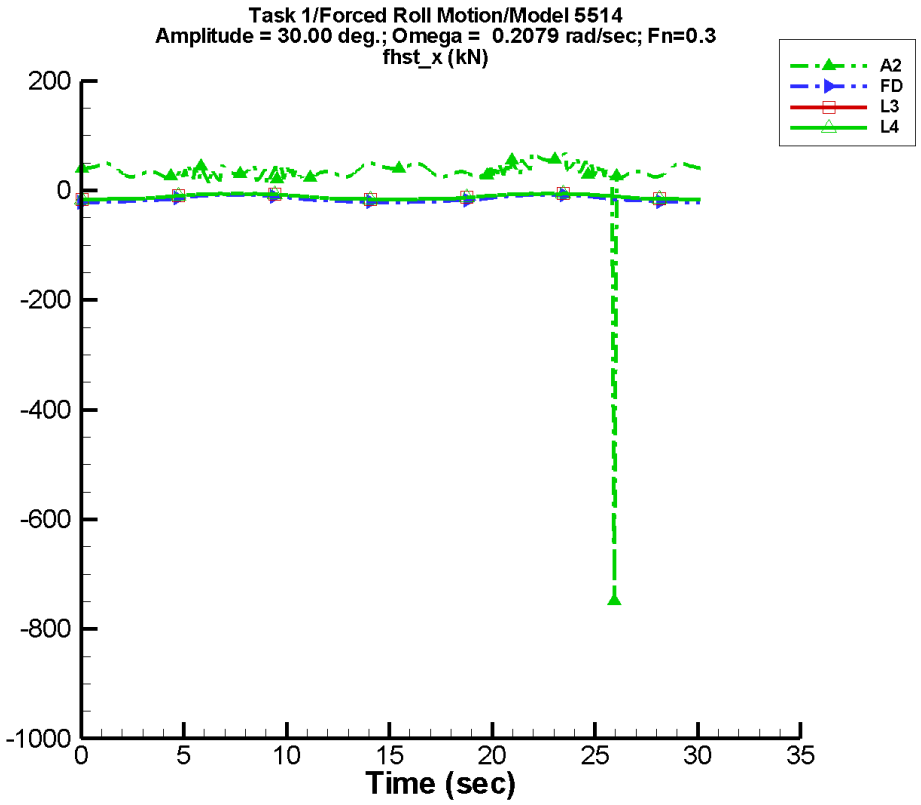
Figure D–227. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–453. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 35.6 | 6.87E-02 | -59 | 11.7 | 87 |
| FD | -20.3 | 3.08E-03 | -170 | 1.12 | -91 |
| L1 | — | — | — | — | — |
| L3 | -15.5 | 1.48E-02 | -61 | 0.682 | -92 |
| L4 | -15.5 | 1.48E-02 | -61 | 0.682 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–454. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 24.9 | 49.4 | 24.9 | 48.9 |
| FD | -21.4 | -19.1 | -21.4 | -19.1 |
| L1 | — | — | — | — |
| L3 | -16.4 | -15.0 | -16.4 | -15.0 |
| L4 | -16.4 | -15.0 | -16.4 | -15.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

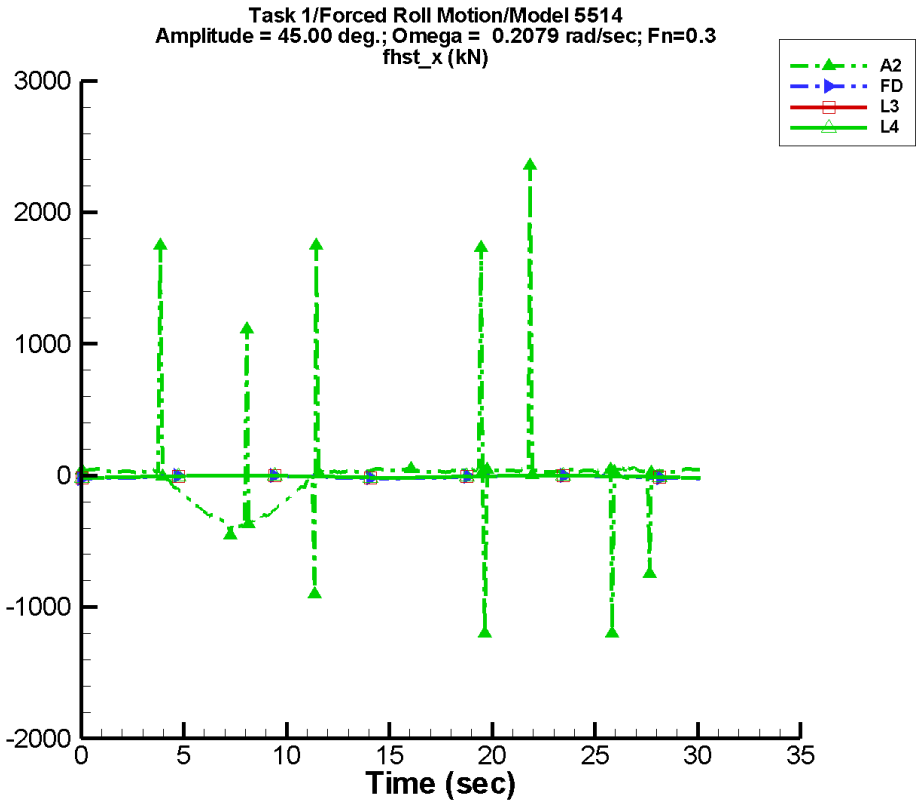
Figure D–228. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–455. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 33.7 | 3.43 | -123 | 5.03 | 23 |
| FD | -15.6 | 2.05E-02 | -170 | 6.73 | -91 |
| L1 | — | — | — | — | — |
| L3 | -11.6 | 5.98E-02 | 118 | 5.53 | -91 |
| L4 | -11.6 | 5.98E-02 | 118 | 5.53 | -91 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–456. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -748. | 69.2 | -77.4 | 58.6 |
| FD | -21.4 | -7.97 | -21.3 | -8.00 |
| L1 | — | — | — | — |
| L3 | -16.4 | -5.86 | -16.4 | -5.97 |
| L4 | -16.4 | -5.86 | -16.4 | -5.97 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

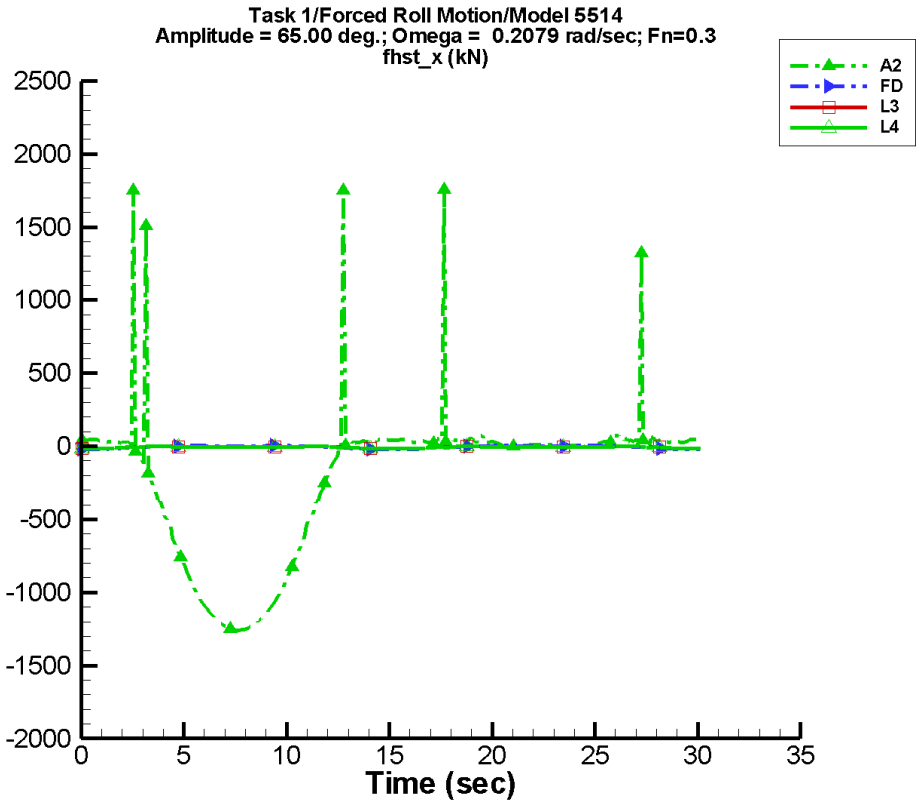
Figure D–229. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–457. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -16.4 | 119. | -177 | 96.3 | 70 |
| FD | -9.65 | 2.29E-02 | 15 | 11.2 | -89 |
| L1 | — | — | — | — | — |
| L3 | -7.52 | 3.71E-02 | -24 | 8.48 | -92 |
| L4 | -7.52 | 3.71E-02 | -24 | 8.48 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–458. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.20E+03 | 2.36E+03 | -391. | 349. |
| FD | -21.4 | 0.541 | -21.4 | 0.514 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.04 | -16.3 | 0.531 |
| L4 | -16.4 | 1.04 | -16.3 | 0.531 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

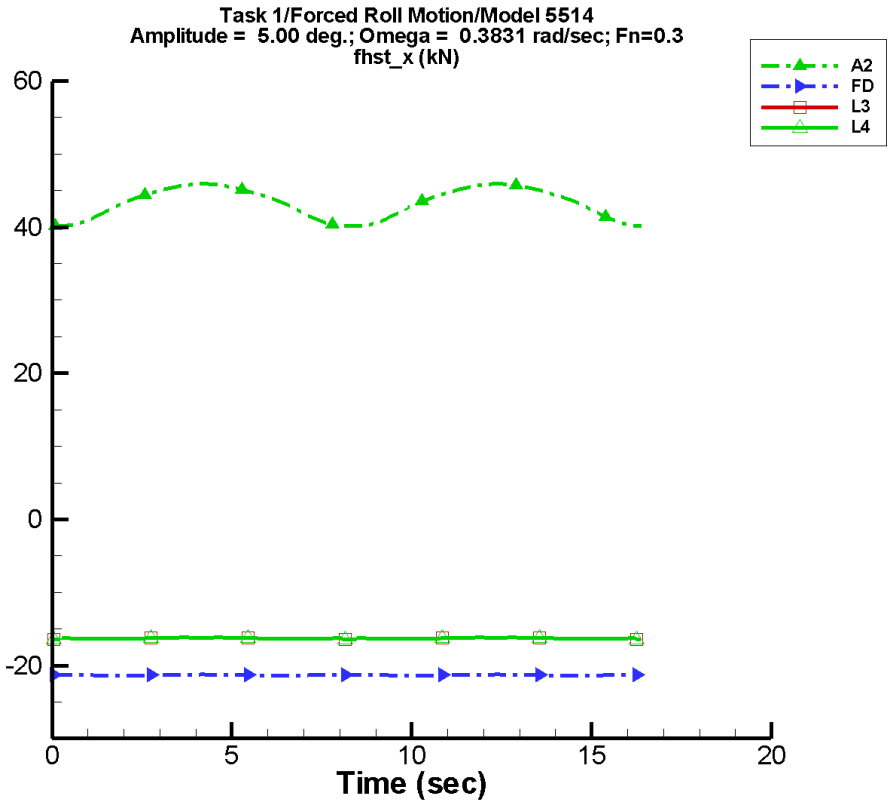
Figure D–230. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–459. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -212. | 475. | 177 | 402. | 84 |
| FD | -5.09 | 0.114 | 5 | 11.8 | -88 |
| L1 | — | — | — | — | — |
| L3 | -7.22 | 0.379 | -60 | 3.74 | -92 |
| L4 | -7.22 | 0.379 | -60 | 3.74 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–460. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.26E+03 | 1.76E+03 | -1.26E+03 | 263. |
| FD | -21.4 | 4.06 | -21.3 | 3.87 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.03 | -16.3 | 8.07E-02 |
| L4 | -16.4 | 1.03 | -16.3 | 8.07E-02 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

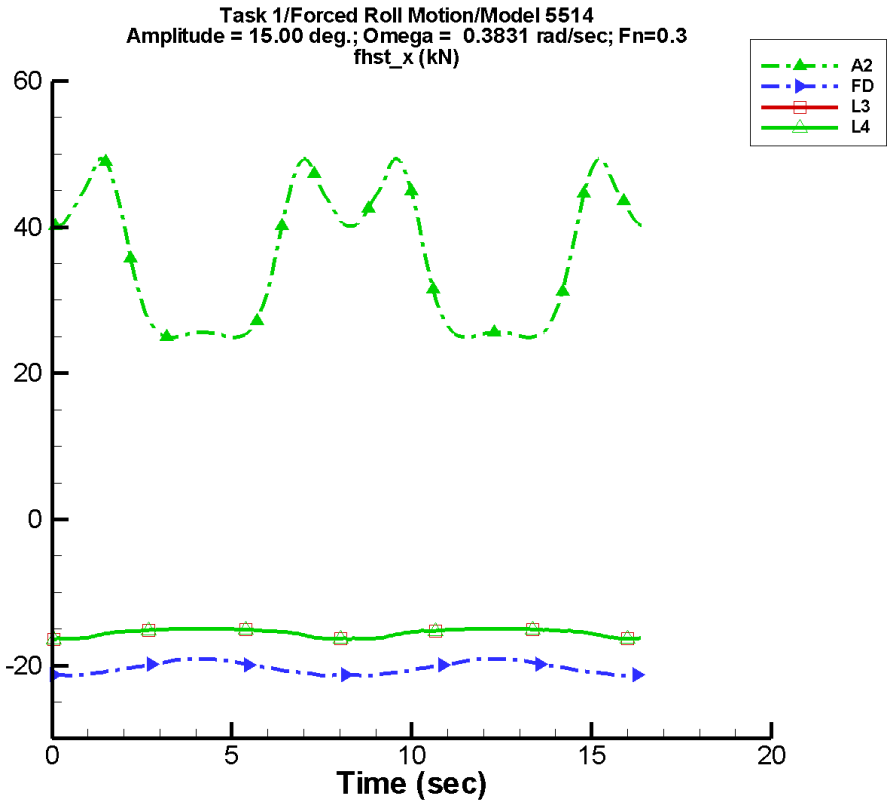
Figure D–231. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–461. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 43.3 | 5.33E-03 | 9 | 2.86 | -94 |
| FD | -21.3 | 3.24E-03 | 116 | 2.61E-02 | -93 |
| L1 | — | — | — | — | — |
| L3 | -16.3 | 1.42E-03 | -157 | 7.32E-02 | -93 |
| L4 | -16.3 | 1.42E-03 | -157 | 7.32E-02 | -93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–462. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 40.2 | 45.9 | 40.2 | 45.9 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | — | — | — | — |
| L3 | -16.4 | -16.1 | -16.4 | -16.2 |
| L4 | -16.4 | -16.1 | -16.4 | -16.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

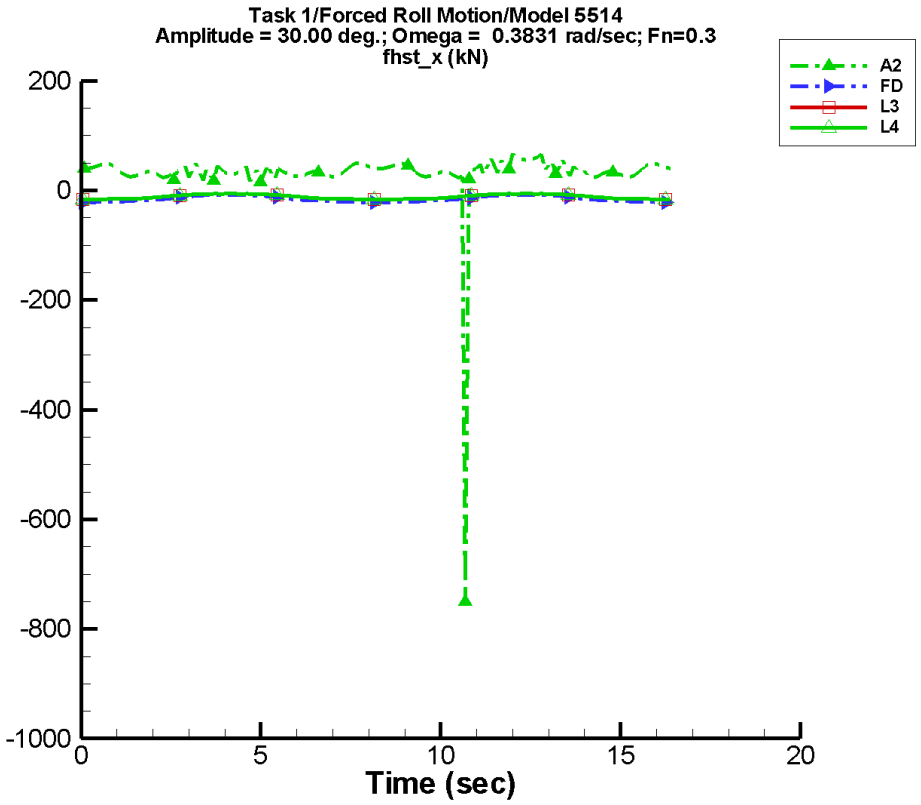
Figure D–232. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–463. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 35.6 | 8.01E-02 | -54 | 11.7 | 85 |
| FD | -20.3 | 5.38E-03 | 123 | 1.13 | -90 |
| L1 | — | — | — | — | — |
| L3 | -15.5 | 8.09E-03 | 10 | 0.707 | -92 |
| L4 | -15.5 | 8.09E-03 | 10 | 0.707 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–464. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 24.9 | 49.4 | 25.1 | 47.9 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | — | — | — | — |
| L3 | -16.4 | -15.0 | -16.4 | -15.0 |
| L4 | -16.4 | -15.0 | -16.4 | -15.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

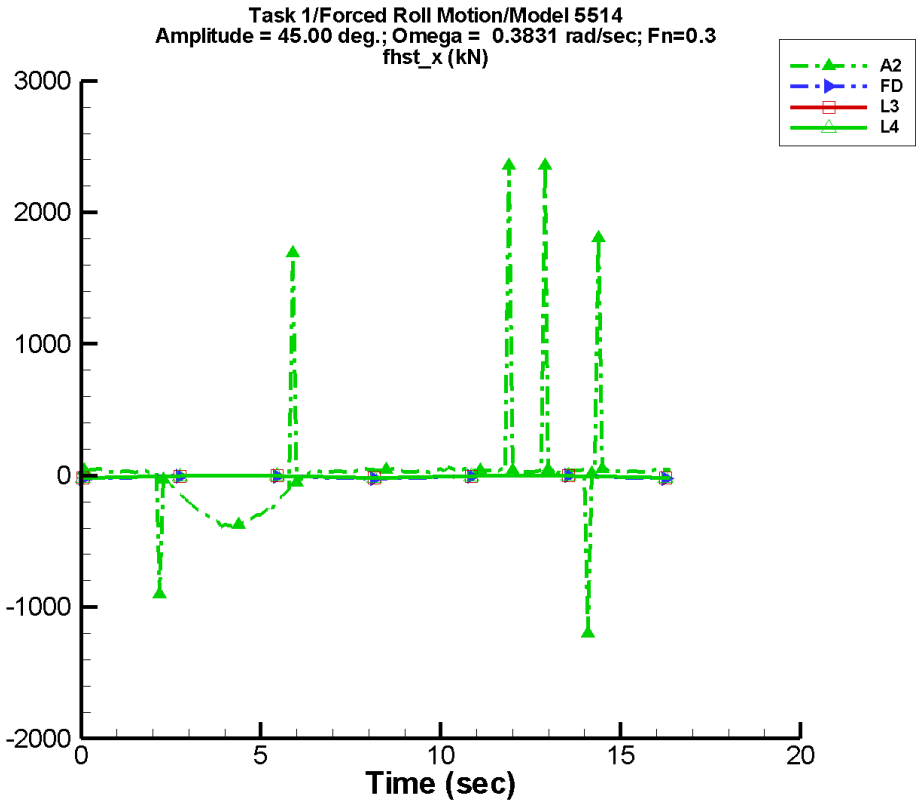
Figure D–233. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–465. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 32.3 | 6.83 | 65 | 8.86 | 161 |
| FD | -15.6 | 6.56E-02 | 122 | 6.81 | -90 |
| L1 | — | — | — | — | — |
| L3 | -11.5 | 3.93E-02 | -174 | 5.43 | -93 |
| L4 | -11.5 | 3.93E-02 | -174 | 5.43 | -93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–466. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -750. | 67.2 | -73.5 | 58.2 |
| FD | -21.4 | -7.97 | -21.3 | -8.09 |
| L1 | — | — | — | — |
| L3 | -16.4 | -5.88 | -16.4 | -6.04 |
| L4 | -16.4 | -5.88 | -16.4 | -6.04 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

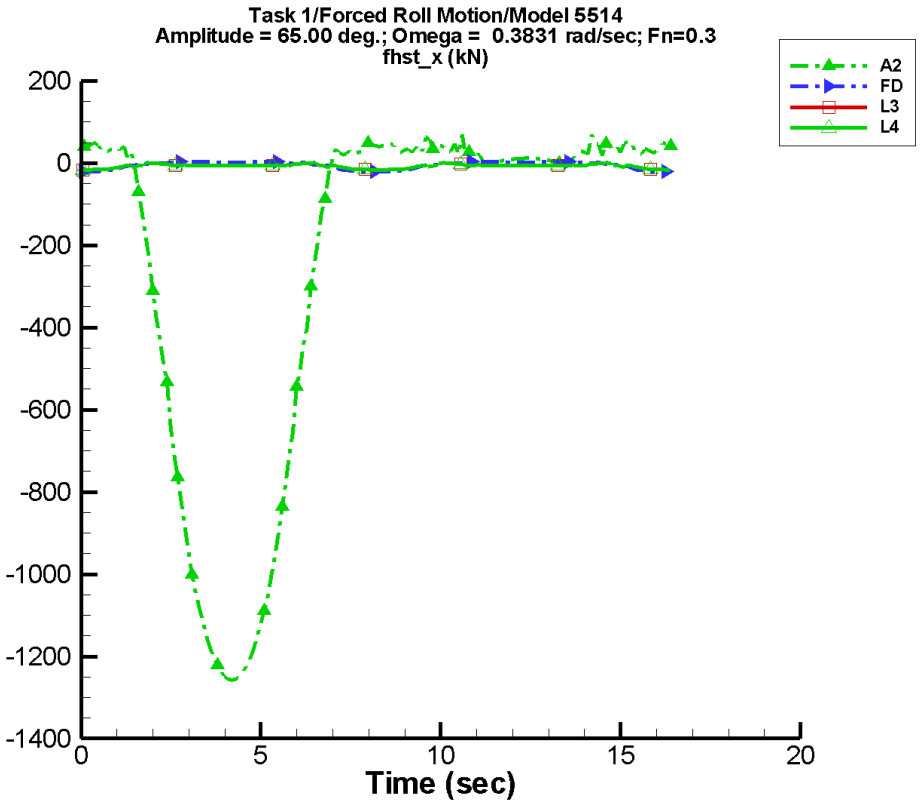
Figure D–234. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–467. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 12.0 | 173. | 178 | 65.6 | 103 |
| FD | -9.60 | 0.109 | -60 | 11.1 | -90 |
| L1 | — | — | — | — | — |
| L3 | -7.49 | 8.90E-02 | -14 | 8.56 | -92 |
| L4 | -7.49 | 8.90E-02 | -14 | 8.56 | -92 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–468. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.20E+03 | 2.36E+03 | -373. | 332. |
| FD | -21.4 | 0.538 | -21.3 | 0.472 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.03 | -16.4 | 0.366 |
| L4 | -16.4 | 1.03 | -16.4 | 0.366 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

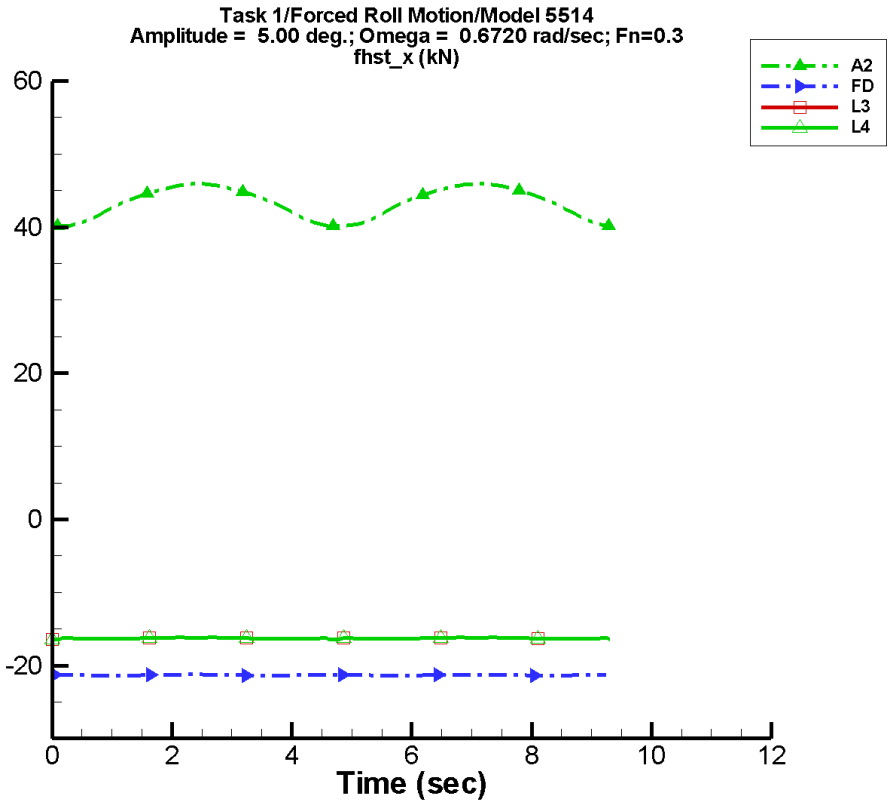
Figure D–235. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–469. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -234. | 478. | 176 | 384. | 83 |
| FD | -5.02 | 0.207 | -61 | 11.5 | -89 |
| L1 | — | — | — | — | — |
| L3 | -7.32 | 0.258 | -16 | 4.44 | -87 |
| L4 | -7.32 | 0.258 | -16 | 4.44 | -87 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–470. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.26E+03 | 70.2 | -1.25E+03 | 47.9 |
| FD | -21.4 | 4.05 | -21.2 | 3.38 |
| L1 | — | — | — | — |
| L3 | -16.4 | 0.639 | -16.4 | -0.378 |
| L4 | -16.4 | 0.639 | -16.4 | -0.378 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

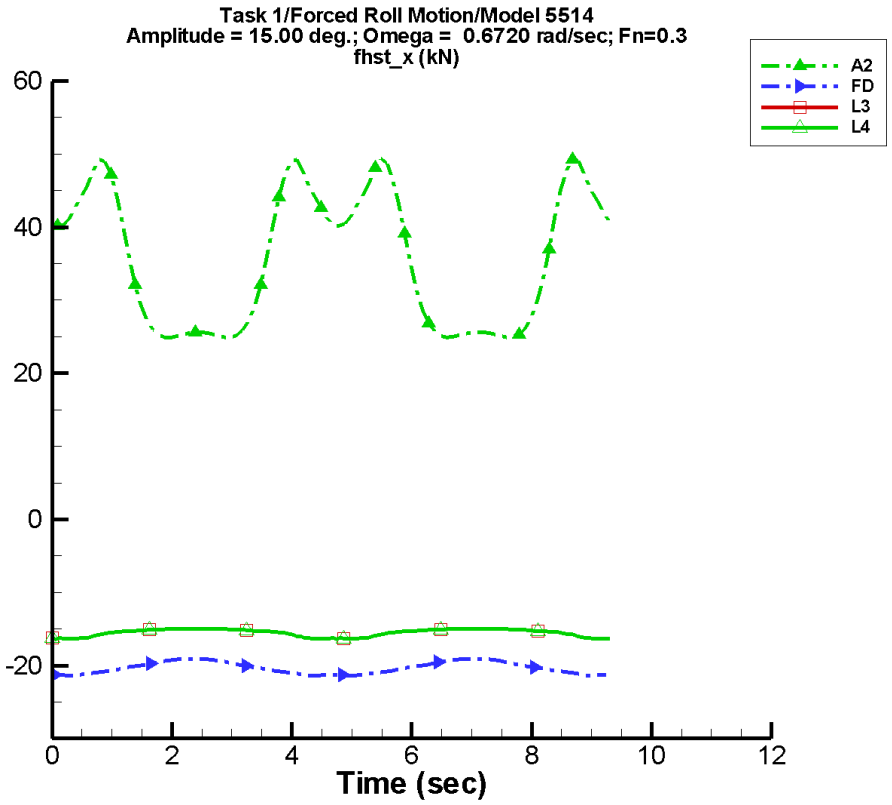
Figure D–236. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–471. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 43.3 | 2.01E-02 | -10 | 2.88 | -97 |
| FD | -21.3 | 4.68E-03 | 147 | 2.49E-02 | -103 |
| L1 | — | — | — | — | — |
| L3 | -16.3 | 2.42E-03 | -165 | 7.04E-02 | -96 |
| L4 | -16.3 | 2.42E-03 | -165 | 7.04E-02 | -96 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–472. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 40.2 | 45.9 | 40.2 | 45.8 |
| FD | -21.4 | -21.2 | -21.4 | -21.2 |
| L1 | — | — | — | — |
| L3 | -16.4 | -16.1 | -16.4 | -16.2 |
| L4 | -16.4 | -16.1 | -16.4 | -16.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

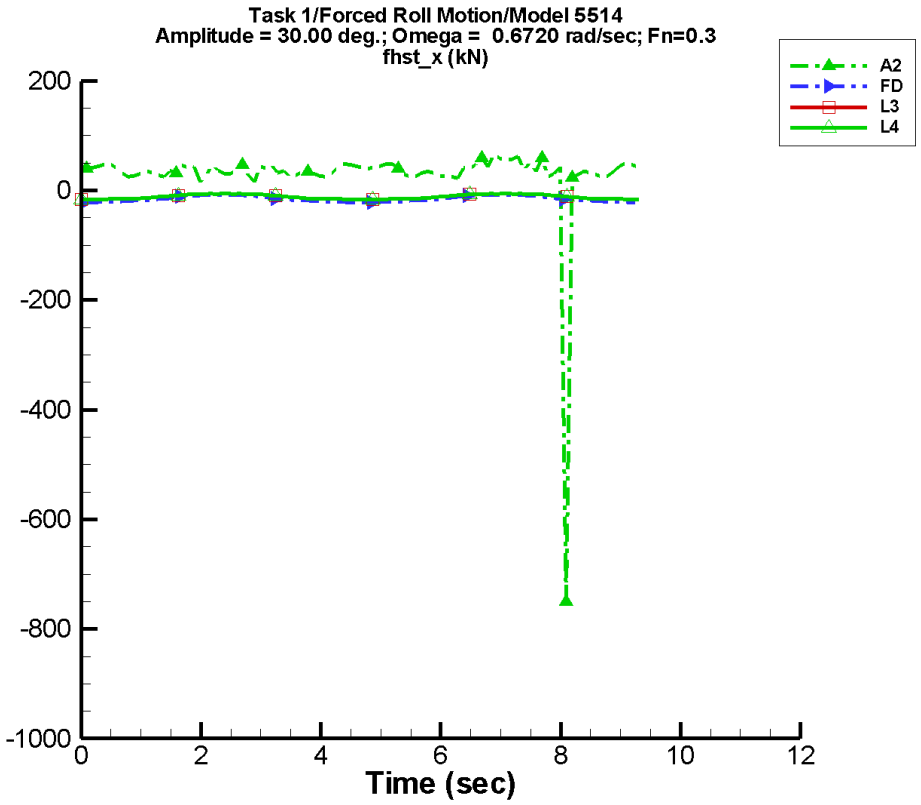
Figure D–237. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–473. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 35.6 | 9.48E-02 | -70 | 11.7 | 81 |
| FD | -20.3 | 1.00E-02 | 152 | 1.13 | -91 |
| L1 | — | — | — | — | — |
| L3 | -15.5 | 1.40E-02 | -3 | 0.707 | -93 |
| L4 | -15.5 | 1.40E-02 | -3 | 0.707 | -93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–474. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | 24.9 | 49.4 | 25.1 | 46.0 |
| FD | -21.4 | -19.1 | -21.3 | -19.1 |
| L1 | — | — | — | — |
| L3 | -16.4 | -15.0 | -16.4 | -15.0 |
| L4 | -16.4 | -15.0 | -16.4 | -15.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

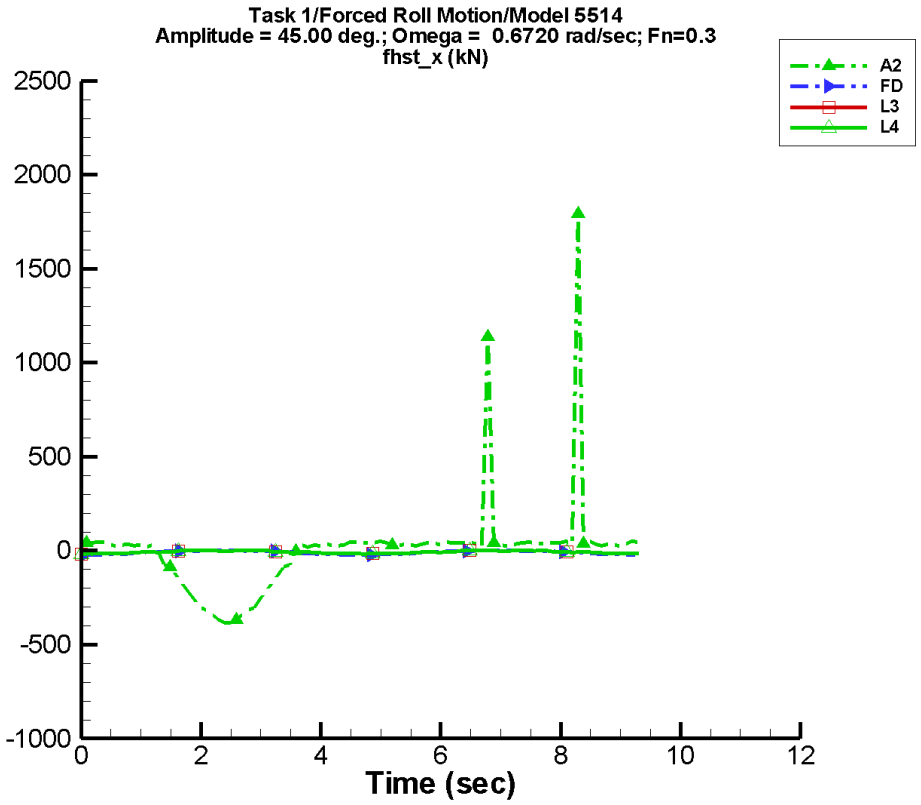
Figure D–238. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–475. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 28.5 | 12.7 | -56 | 15.1 | 12 |
| FD | -15.5 | 7.11E-02 | 150 | 6.78 | -91 |
| L1 | — | — | — | — | — |
| L3 | -11.5 | 5.00E-02 | -178 | 5.44 | -95 |
| L4 | -11.5 | 5.00E-02 | -178 | 5.44 | -95 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–476. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -749. | 66.4 | -71.6 | 62.8 |
| FD | -21.4 | -7.97 | -21.3 | -8.18 |
| L1 | — | — | — | — |
| L3 | -16.4 | -5.87 | -16.4 | -6.04 |
| L4 | -16.4 | -5.87 | -16.4 | -6.04 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

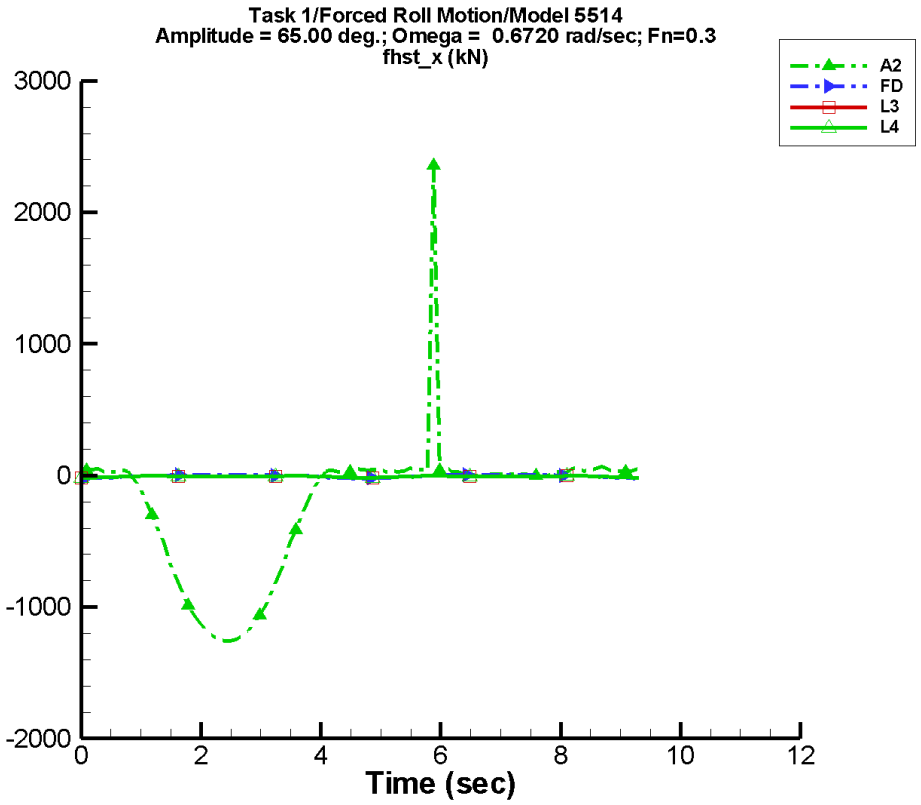
Figure D–239. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–477. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 5.47 | 169. | 166 | 79.8 | 93 |
| FD | -9.68 | 7.96E-02 | -31 | 11.2 | -89 |
| L1 | — | — | — | — | — |
| L3 | -7.53 | 4.56E-02 | -134 | 8.53 | -94 |
| L4 | -7.53 | 4.56E-02 | -134 | 8.53 | -94 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–478. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -383. | 1.79E+03 | -353. | 279. |
| FD | -21.4 | 0.537 | -21.2 | 0.365 |
| L1 | — | — | — | — |
| L3 | -16.4 | 1.03 | -16.3 | 0.228 |
| L4 | -16.4 | 1.03 | -16.3 | 0.228 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

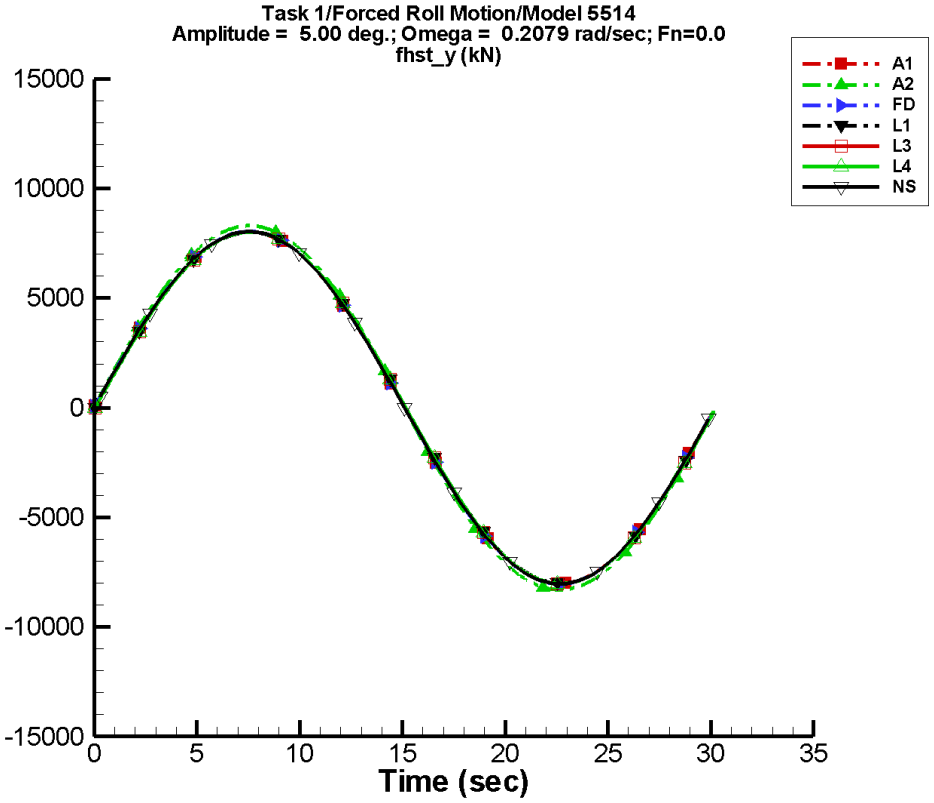
Figure D–240. Time history of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–479. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -203. | 501. | 179 | 379. | 72 |
| FD | -5.22 | 0.352 | -29 | 11.6 | -88 |
| L1 | — | — | — | — | — |
| L3 | -7.33 | 0.327 | 0 | 4.51 | -87 |
| L4 | -7.33 | 0.327 | 0 | 4.51 | -87 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–480. Minimum and maximum of of $F_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | — | — | — | — |
| A2 | -1.26E+03 | 2.36E+03 | -1.22E+03 | 349. |
| FD | -21.4 | 4.06 | -20.8 | 2.74 |
| L1 | — | — | — | — |
| L3 | -16.4 | 0.639 | -16.4 | -1.79 |
| L4 | -16.4 | 0.639 | -16.4 | -1.79 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA.

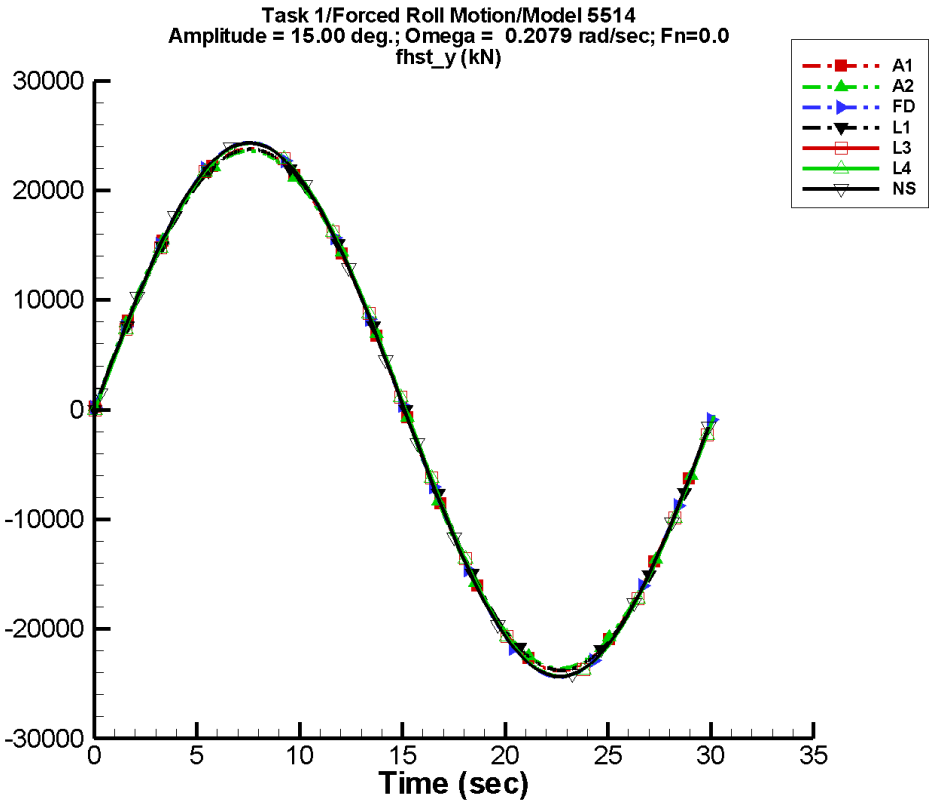
Figure D–241. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–481. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.89E-02 | 8.02E+03 | 0 | 0.405 | 58 |
| A2 | 1.27 | 8.34E+03 | 0 | 6.92 | 64 |
| FD | -5.47E-03 | 8.04E+03 | 0 | 4.13E-02 | 154 |
| L1 | 0.145 | 8.00E+03 | -1 | 0.608 | 87 |
| L3 | -0.147 | 8.02E+03 | -1 | 0.529 | -93 |
| L4 | -0.147 | 8.02E+03 | -1 | 0.529 | -93 |
| NF | — | — | — | — | — |
| NS | -8.15E-05 | 8.03E+03 | 0 | 6.10E-04 | 8 |

Table D–482. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+03 | 8.02E+03 | -8.01E+03 | 8.02E+03 |
| A2 | -8.30E+03 | 8.30E+03 | -8.29E+03 | 8.30E+03 |
| FD | -8.04E+03 | 8.04E+03 | -8.03E+03 | 8.03E+03 |
| L1 | -8.00E+03 | 8.00E+03 | -8.00E+03 | 8.00E+03 |
| L3 | -8.02E+03 | 8.02E+03 | -8.02E+03 | 8.02E+03 |
| L4 | -8.02E+03 | 8.02E+03 | -8.02E+03 | 8.02E+03 |
| NF | — | — | — | — |
| NS | -8.03E+03 | 8.03E+03 | -7.95E+03 | 7.95E+03 |




Data identically zero, insufficient, or not available from NFA.

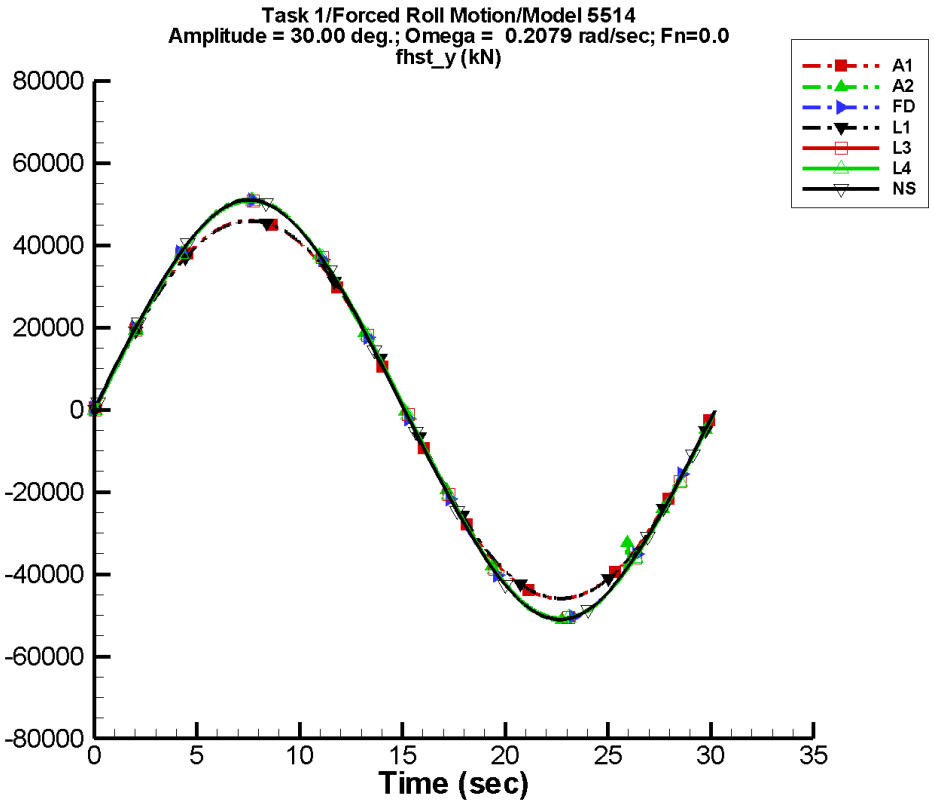
Figure D–242. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–483. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.72 | 2.39E+04 | 0 | 10.8 | 59 |
| A2 | 10.3 | 2.38E+04 | 0 | 51.0 | 67 |
| FD | -2.11 | 2.43E+04 | 0 | 10.7 | -124 |
| L1 | 4.15 | 2.38E+04 | -1 | 16.4 | 87 |
| L3 | -4.34 | 2.42E+04 | -1 | 17.1 | -93 |
| L4 | -4.34 | 2.42E+04 | -1 | 17.1 | -93 |
| NF | — | — | — | — | — |
| NS | 2.64E-04 | 2.43E+04 | 0 | 2.48E-03 | 57 |

Table D–484. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.38E+04 | 2.38E+04 | -2.38E+04 | 2.38E+04 |
| A2 | -2.36E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| FD | -2.44E+04 | 2.44E+04 | -2.44E+04 | 2.44E+04 |
| L1 | -2.38E+04 | 2.38E+04 | -2.38E+04 | 2.38E+04 |
| L3 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| L4 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| NF | — | — | — | — |
| NS | -2.43E+04 | 2.43E+04 | -2.41E+04 | 2.41E+04 |




Data identically zero, insufficient, or not available from NFA.

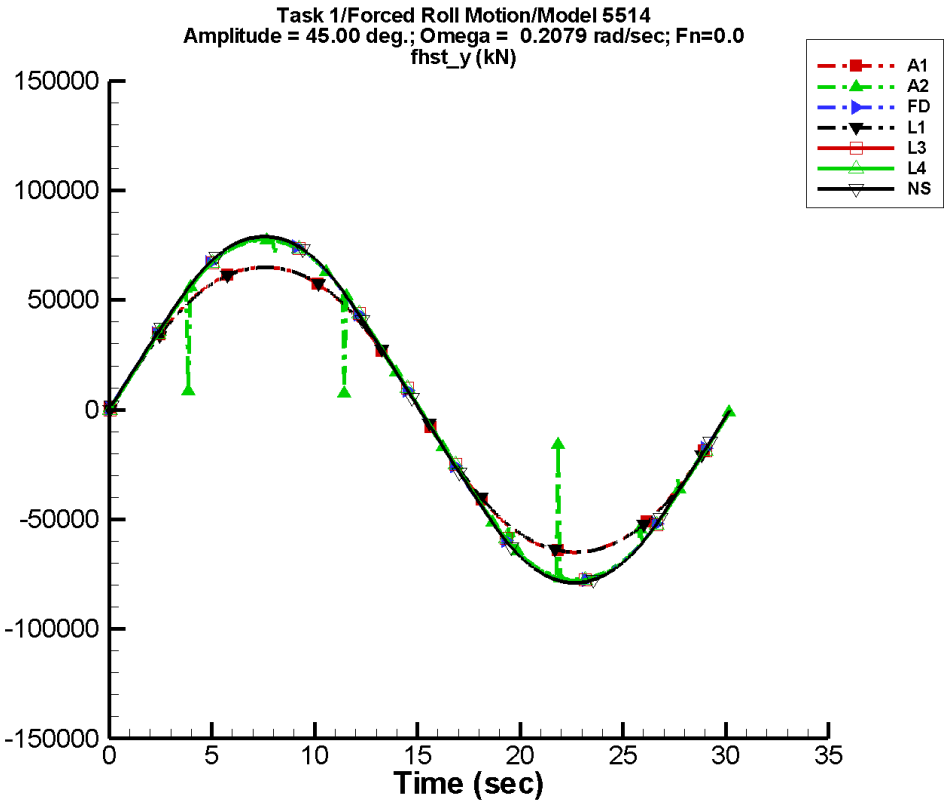
Figure D–243. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–485. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 13.7 | 4.65E+04 | 0 | 85.5 | 59 |
| A2 | -1.08 | 5.02E+04 | 0 | 201. | -136 |
| FD | -21.0 | 5.02E+04 | 0 | 106. | -123 |
| L1 | 32.8 | 4.64E+04 | -1 | 129. | 87 |
| L3 | -42.3 | 5.00E+04 | -1 | 167. | -93 |
| L4 | -42.3 | 5.00E+04 | -1 | 167. | -93 |
| NF | — | — | — | — | — |
| NS | -1.31E-03 | 5.02E+04 | 0 | 2.15E-03 | 67 |

Table D–486. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E+04 | 4.60E+04 | -4.59E+04 | 4.60E+04 |
| A2 | -5.12E+04 | 5.12E+04 | -5.11E+04 | 5.12E+04 |
| FD | -5.09E+04 | 5.09E+04 | -5.09E+04 | 5.09E+04 |
| L1 | -4.59E+04 | 4.59E+04 | -4.59E+04 | 4.59E+04 |
| L3 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.07E+04 |
| L4 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.07E+04 |
| NF | — | — | — | — |
| NS | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |




Data identically zero, insufficient, or not available from NFA.

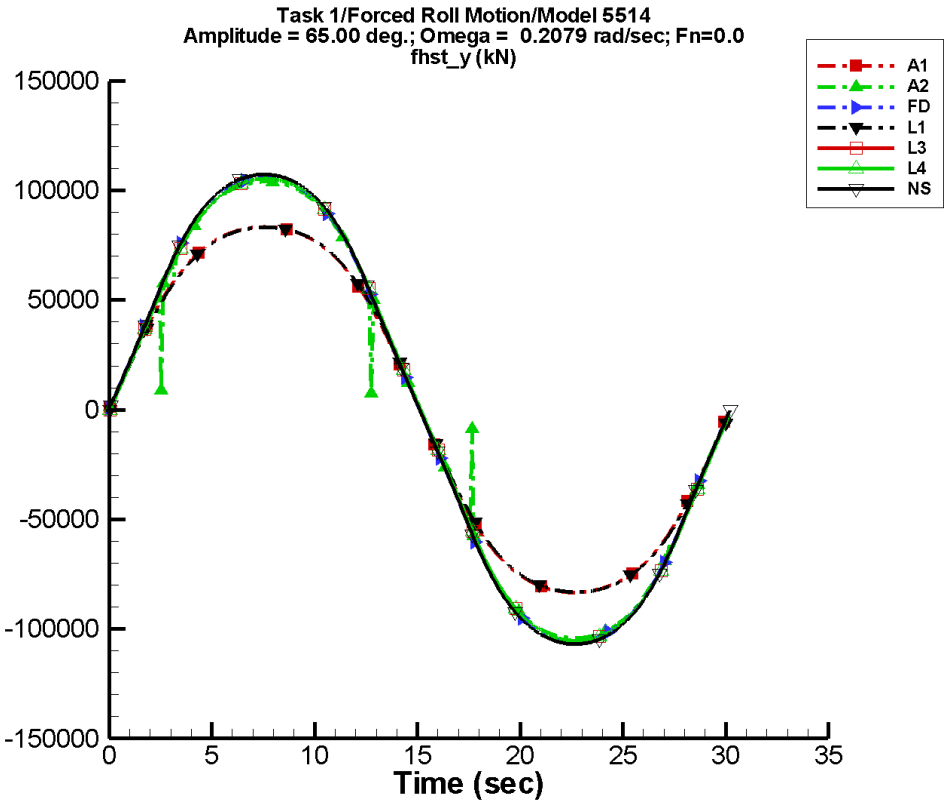
Figure D–244. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–487. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 45.6 | 6.68E+04 | 0 | 283. | 59 |
| A2 | 0.539 | 7.60E+04 | 0 | 560. | -71 |
| FD | -41.8 | 7.76E+04 | 0 | 201. | -112 |
| L1 | 108. | 6.67E+04 | -1 | 427. | 87 |
| L3 | -80.8 | 7.73E+04 | -1 | 309. | -94 |
| L4 | -80.8 | 7.73E+04 | -1 | 309. | -94 |
| NF | — | — | — | — | — |
| NS | 9.39E-02 | 7.82E+04 | 0 | 0.156 | -90 |

Table D–488. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.50E+04 | 6.50E+04 | -6.50E+04 | 6.51E+04 |
| A2 | -7.74E+04 | 7.77E+04 | -7.80E+04 | 7.74E+04 |
| FD | -7.82E+04 | 7.82E+04 | -7.81E+04 | 7.81E+04 |
| L1 | -6.49E+04 | 6.49E+04 | -6.49E+04 | 6.49E+04 |
| L3 | -7.79E+04 | 7.79E+04 | -7.79E+04 | 7.79E+04 |
| L4 | -7.79E+04 | 7.79E+04 | -7.79E+04 | 7.79E+04 |
| NF | — | — | — | — |
| NS | -7.90E+04 | 7.90E+04 | -7.89E+04 | 7.89E+04 |




Data identically zero, insufficient, or not available from NFA.

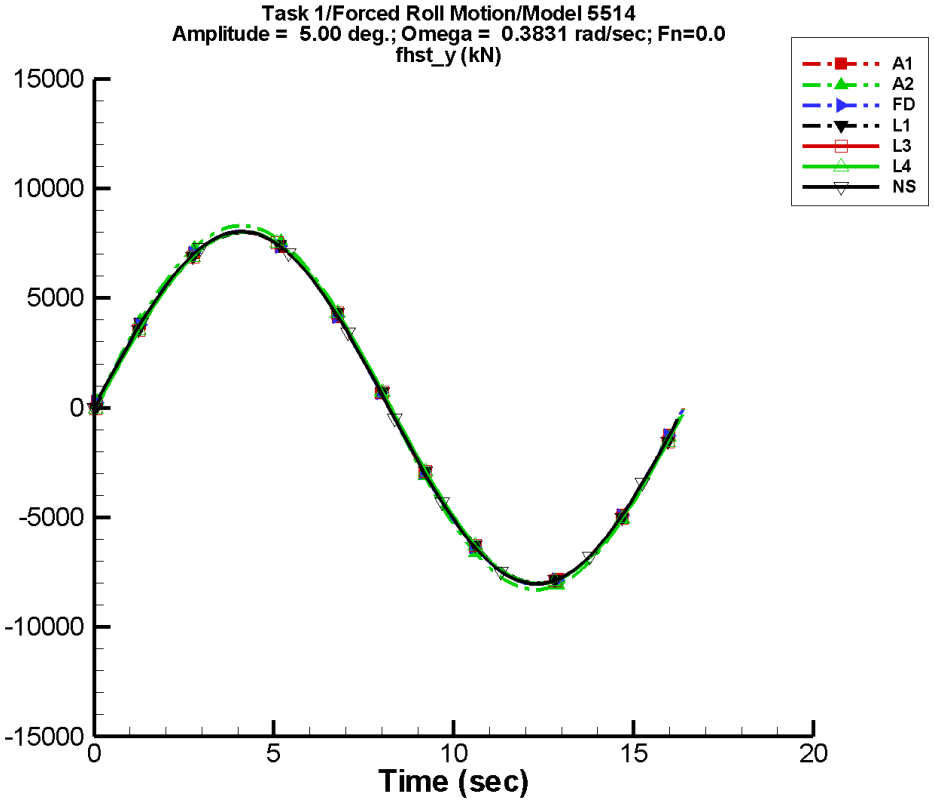
Figure D–245. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–489. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 133. | 8.84E+04 | 0 | 819. | 59 |
| A2 | -92.7 | 1.07E+05 | 0 | 494. | 5 |
| FD | 20.1 | 1.09E+05 | 0 | 228. | 26 |
| L1 | 314. | 8.83E+04 | -1 | 1.24E+03 | 87 |
| L3 | 81.7 | 1.08E+05 | -1 | 354. | 90 |
| L4 | 81.7 | 1.08E+05 | -1 | 354. | 90 |
| NF | — | — | — | — | — |
| NS | 92.8 | 1.10E+05 | 0 | 114. | -90 |

Table D–490. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.34E+04 | 8.34E+04 | -8.33E+04 | 8.35E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.06E+05 | 1.06E+05 |
| L1 | -8.32E+04 | 8.32E+04 | -8.32E+04 | 8.32E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |




Data identically zero, insufficient, or not available from NFA.

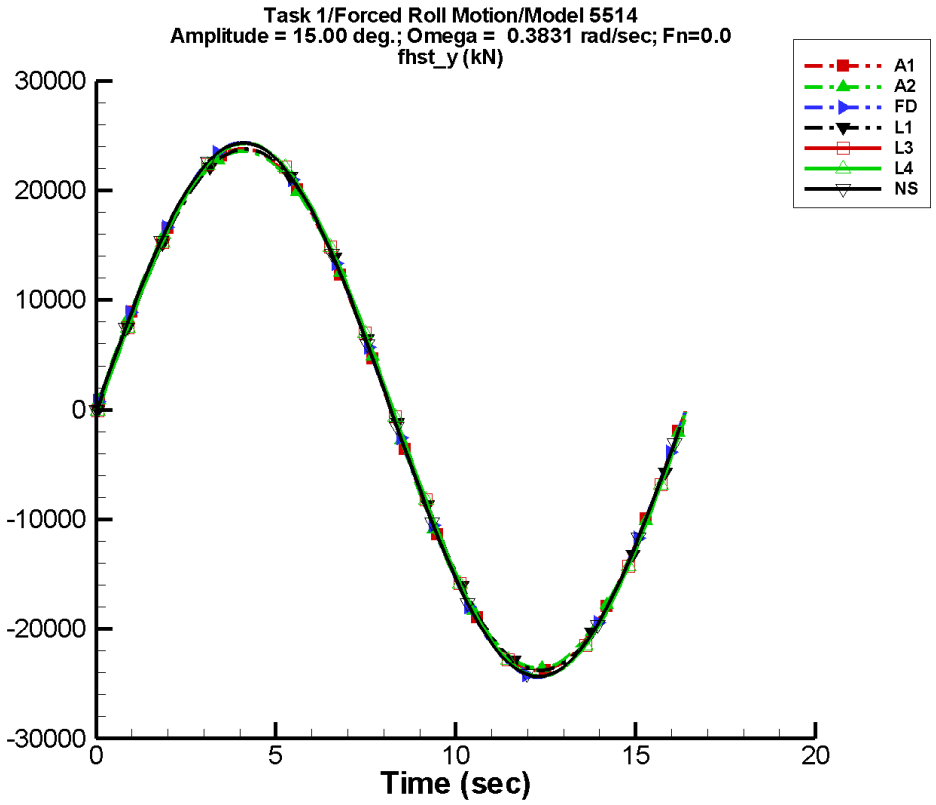
Figure D–246. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–491. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.39E-02 | 8.02E+03 | 0 | 0.431 | 60 |
| A2 | 1.20 | 8.34E+03 | 0 | 6.97 | 60 |
| FD | -2.27E-02 | 8.04E+03 | 0 | 5.68E-02 | -47 |
| L1 | 0.197 | 8.00E+03 | -1 | 0.285 | 28 |
| L3 | -9.17E-02 | 8.02E+03 | -1 | 0.250 | -148 |
| L4 | -9.17E-02 | 8.02E+03 | -1 | 0.250 | -148 |
| NF | — | — | — | — | — |
| NS | 3.60E-04 | 8.03E+03 | 0 | 1.01E-03 | -35 |

Table D–492. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+03 | 8.02E+03 | -7.99E+03 | 8.04E+03 |
| A2 | -8.30E+03 | 8.30E+03 | -8.27E+03 | 8.33E+03 |
| FD | -8.04E+03 | 8.04E+03 | -8.01E+03 | 8.01E+03 |
| L1 | -8.00E+03 | 8.00E+03 | -7.99E+03 | 7.99E+03 |
| L3 | -8.02E+03 | 8.02E+03 | -8.01E+03 | 8.01E+03 |
| L4 | -8.02E+03 | 8.02E+03 | -8.01E+03 | 8.01E+03 |
| NF | — | — | — | — |
| NS | -8.03E+03 | 8.03E+03 | -7.95E+03 | 7.95E+03 |




Data identically zero, insufficient, or not available from NFA.

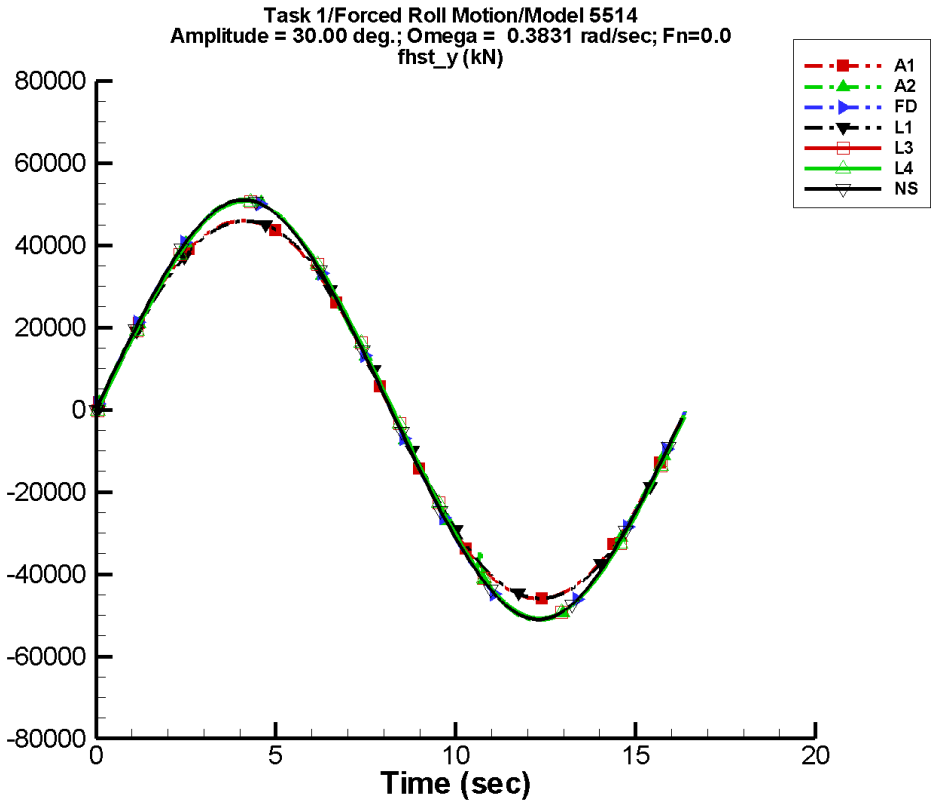
Figure D–247. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–493. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.43 | 2.39E+04 | 0 | 11.6 | 60 |
| A2 | 9.79 | 2.38E+04 | 0 | 52.2 | 65 |
| FD | -2.16 | 2.43E+04 | 0 | 14.6 | -104 |
| L1 | 4.25 | 2.38E+04 | -1 | 7.67 | 28 |
| L3 | -3.95 | 2.42E+04 | -1 | 7.96 | -152 |
| L4 | -3.95 | 2.42E+04 | -1 | 7.96 | -152 |
| NF | — | — | — | — | — |
| NS | 3.54E-04 | 2.43E+04 | 0 | 3.51E-03 | -15 |

Table D–494. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.39E+04 |
| A2 | -2.36E+04 | 2.36E+04 | -2.35E+04 | 2.37E+04 |
| FD | -2.44E+04 | 2.44E+04 | -2.43E+04 | 2.43E+04 |
| L1 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.37E+04 |
| L3 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| L4 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| NF | — | — | — | — |
| NS | -2.43E+04 | 2.43E+04 | -2.41E+04 | 2.41E+04 |




Data identically zero, insufficient, or not available from NFA.

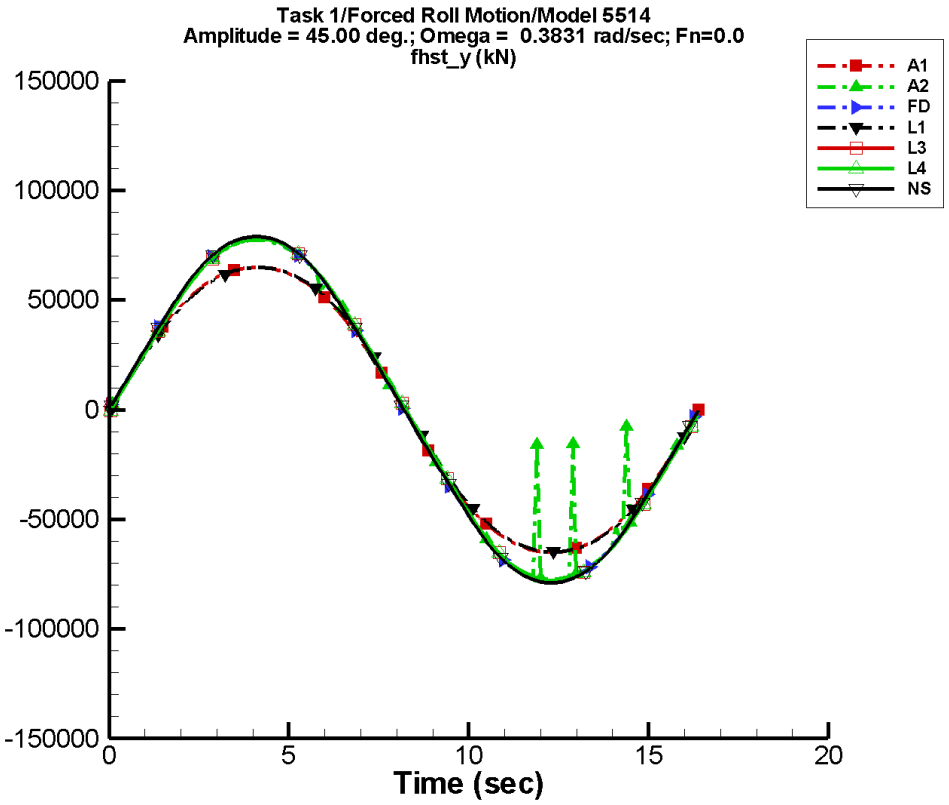
Figure D–248. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–495. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 11.4 | 4.65E+04 | 0 | 91.4 | 60 |
| A2 | 17.6 | 5.01E+04 | 0 | 161. | -106 |
| FD | -21.4 | 5.02E+04 | 0 | 145. | -104 |
| L1 | 32.3 | 4.65E+04 | -1 | 60.6 | 28 |
| L3 | -40.5 | 5.00E+04 | -1 | 78.0 | -153 |
| L4 | -40.5 | 5.00E+04 | -1 | 78.0 | -153 |
| NF | — | — | — | — | — |
| NS | -2.03E-04 | 5.02E+04 | 0 | 1.34E-03 | 101 |

Table D–496. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E+04 | 4.60E+04 | -4.58E+04 | 4.61E+04 |
| A2 | -5.12E+04 | 5.12E+04 | -5.10E+04 | 5.13E+04 |
| FD | -5.09E+04 | 5.09E+04 | -5.07E+04 | 5.07E+04 |
| L1 | -4.59E+04 | 4.59E+04 | -4.58E+04 | 4.58E+04 |
| L3 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.06E+04 |
| L4 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.06E+04 |
| NF | — | — | — | — |
| NS | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |




Data identically zero, insufficient, or not available from NFA.

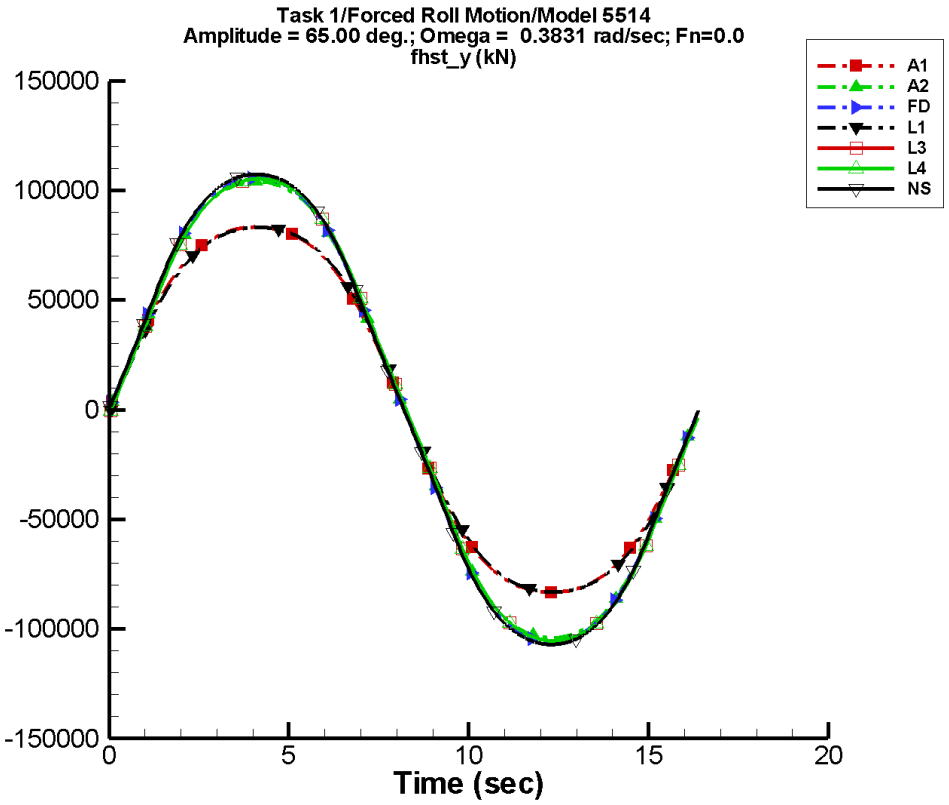
Figure D–249. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–497. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 37.7 | 6.68E+04 | 0 | 302. | 60 |
| A2 | 1.01E+03 | 7.50E+04 | 0 | 1.58E+03 | -114 |
| FD | -32.3 | 7.76E+04 | 0 | 251. | -108 |
| L1 | 106. | 6.68E+04 | -1 | 201. | 29 |
| L3 | -85.1 | 7.72E+04 | -1 | 164. | -145 |
| L4 | -85.1 | 7.72E+04 | -1 | 164. | -145 |
| NF | — | — | — | — | — |
| NS | -0.127 | 7.82E+04 | 0 | 0.202 | 90 |

Table D–498. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.50E+04 | 6.50E+04 | -6.48E+04 | 6.52E+04 |
| A2 | -7.74E+04 | 7.74E+04 | -7.23E+04 | 7.76E+04 |
| FD | -7.82E+04 | 7.82E+04 | -7.79E+04 | 7.79E+04 |
| L1 | -6.49E+04 | 6.49E+04 | -6.48E+04 | 6.48E+04 |
| L3 | -7.79E+04 | 7.79E+04 | -7.78E+04 | 7.78E+04 |
| L4 | -7.79E+04 | 7.79E+04 | -7.78E+04 | 7.78E+04 |
| NF | — | — | — | — |
| NS | -7.90E+04 | 7.90E+04 | -7.89E+04 | 7.89E+04 |




Data identically zero, insufficient, or not available from NFA.

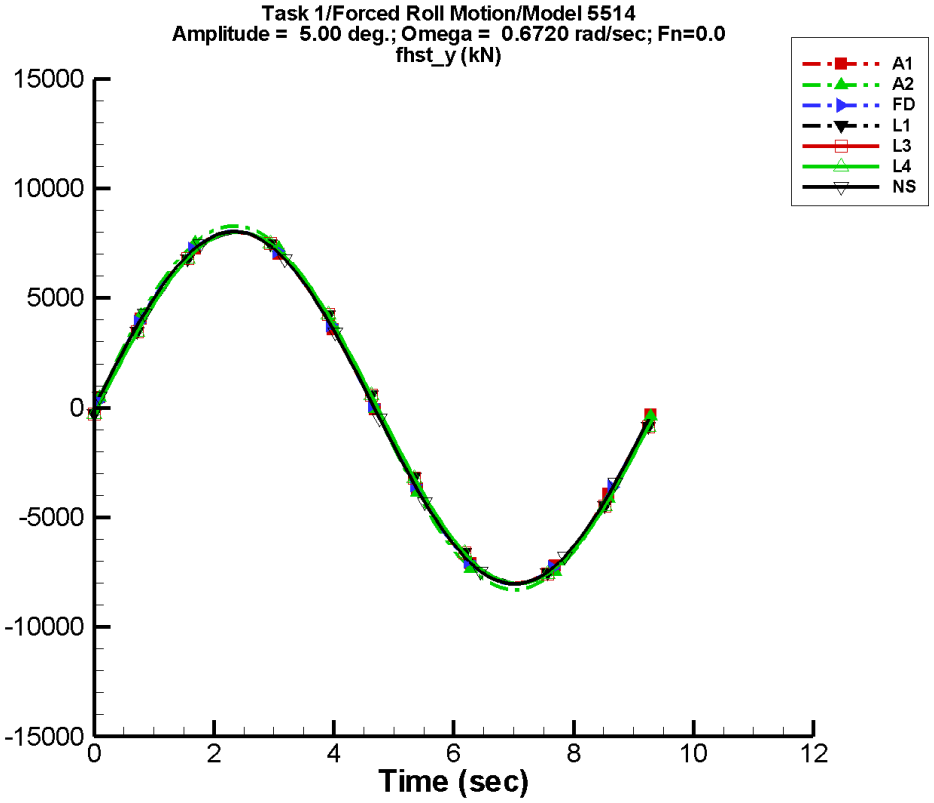
Figure D–250. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–499. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 110. | 8.83E+04 | 0 | 874. | 61 |
| A2 | -20.6 | 1.07E+05 | 0 | 327. | 48 |
| FD | 49.0 | 1.09E+05 | 0 | 323. | 82 |
| L1 | 306. | 8.86E+04 | -1 | 582. | 29 |
| L3 | 62.3 | 1.09E+05 | -1 | 169. | -14 |
| L4 | 62.3 | 1.09E+05 | -1 | 169. | -14 |
| NF | — | — | — | — | — |
| NS | 72.2 | 1.10E+05 | 0 | 85.6 | -90 |

Table D–500. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.34E+04 | 8.34E+04 | -8.32E+04 | 8.37E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.05E+05 | 1.05E+05 |
| L1 | -8.32E+04 | 8.32E+04 | -8.31E+04 | 8.31E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |




Data identically zero, insufficient, or not available from NFA.

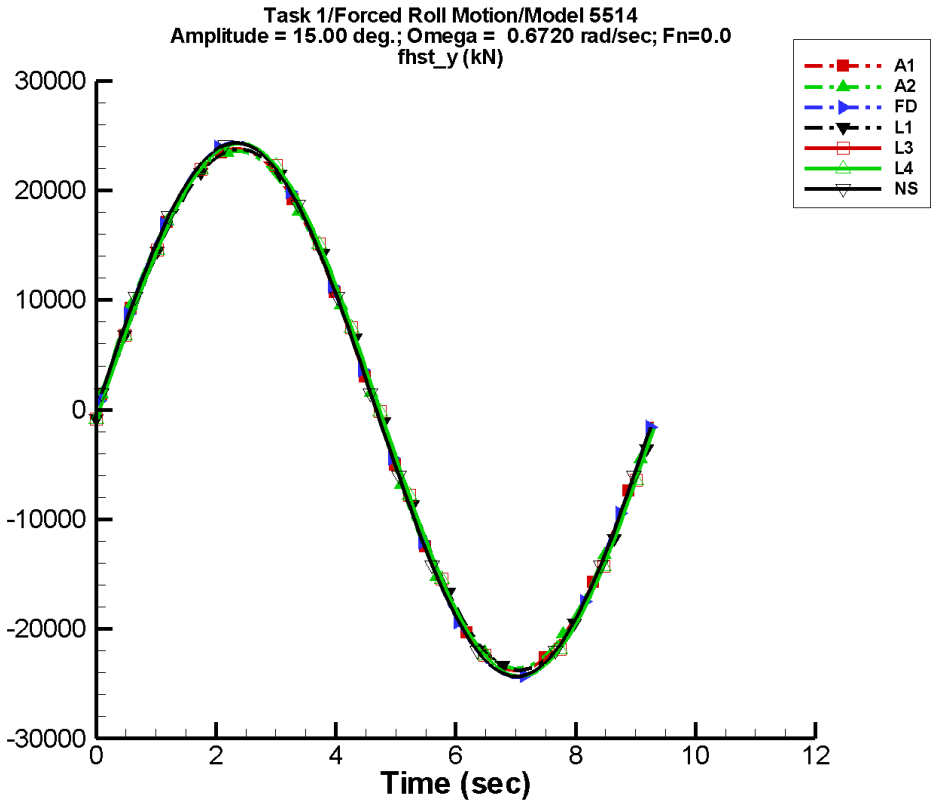
Figure D–251. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–501. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.120 | 8.02E+03 | 0 | 0.308 | 41 |
| A2 | 2.21 | 8.34E+03 | 0 | 5.13 | 41 |
| FD | -4.03E-02 | 8.04E+03 | 0 | 4.32E-02 | 28 |
| L1 | 0.302 | 8.00E+03 | -2 | 0.290 | 27 |
| L3 | 1.20E-02 | 8.02E+03 | -2 | 0.261 | -152 |
| L4 | 1.20E-02 | 8.02E+03 | -2 | 0.261 | -152 |
| NF | — | — | — | — | — |
| NS | -9.13E-04 | 8.03E+03 | 0 | 1.06E-03 | 56 |

Table D–502. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+03 | 8.01E+03 | -7.93E+03 | 7.92E+03 |
| A2 | -8.30E+03 | 8.30E+03 | -8.21E+03 | 8.21E+03 |
| FD | -8.04E+03 | 8.04E+03 | -8.00E+03 | 7.95E+03 |
| L1 | -8.00E+03 | 8.00E+03 | -7.97E+03 | 7.97E+03 |
| L3 | -8.02E+03 | 8.02E+03 | -7.99E+03 | 7.99E+03 |
| L4 | -8.02E+03 | 8.02E+03 | -7.99E+03 | 7.99E+03 |
| NF | — | — | — | — |
| NS | -8.03E+03 | 8.03E+03 | -7.95E+03 | 7.95E+03 |




Data identically zero, insufficient, or not available from NFA.

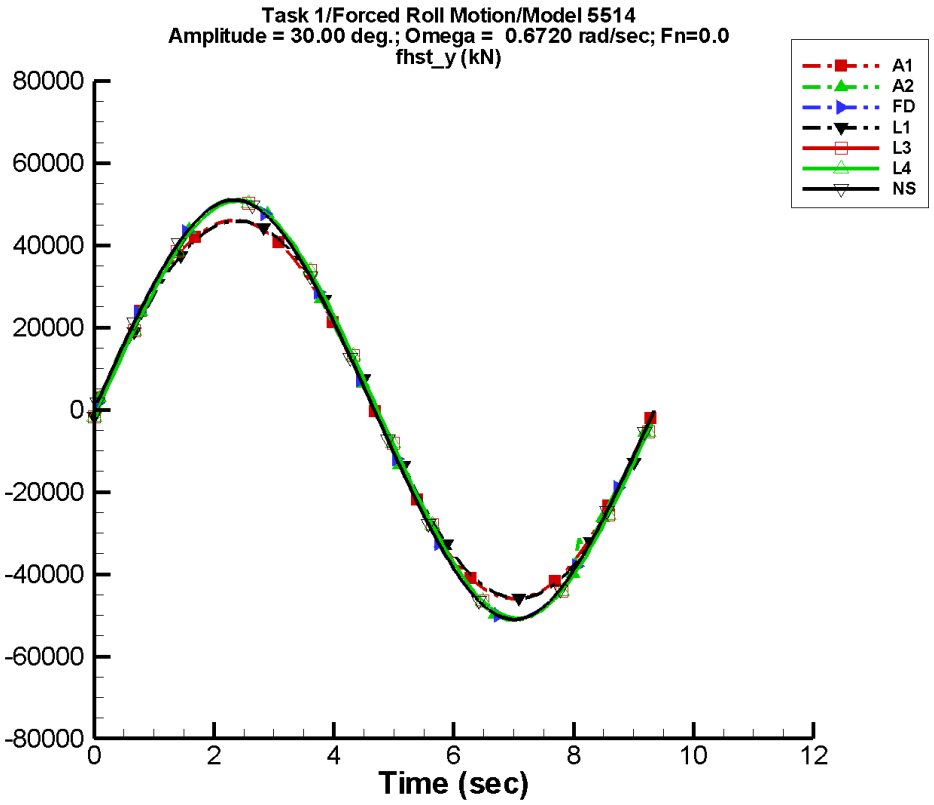
Figure D–252. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–503. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.42 | 2.39E+04 | 0 | 8.13 | 44 |
| A2 | 15.1 | 2.38E+04 | 0 | 41.6 | 54 |
| FD | -5.58 | 2.43E+04 | 0 | 10.3 | -33 |
| L1 | 4.61 | 2.38E+04 | -2 | 7.86 | 25 |
| L3 | -3.88 | 2.42E+04 | -2 | 8.24 | -157 |
| L4 | -3.88 | 2.42E+04 | -2 | 8.24 | -157 |
| NF | — | — | — | — | — |
| NS | -1.20E-03 | 2.43E+04 | 0 | 3.42E-03 | 54 |

Table D–504. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.38E+04 | 2.38E+04 | -2.35E+04 | 2.35E+04 |
| A2 | -2.36E+04 | 2.36E+04 | -2.33E+04 | 2.33E+04 |
| FD | -2.44E+04 | 2.44E+04 | -2.42E+04 | 2.41E+04 |
| L1 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.37E+04 |
| L3 | -2.43E+04 | 2.43E+04 | -2.42E+04 | 2.42E+04 |
| L4 | -2.43E+04 | 2.43E+04 | -2.42E+04 | 2.42E+04 |
| NF | — | — | — | — |
| NS | -2.43E+04 | 2.43E+04 | -2.41E+04 | 2.41E+04 |




Data identically zero, insufficient, or not available from NFA.

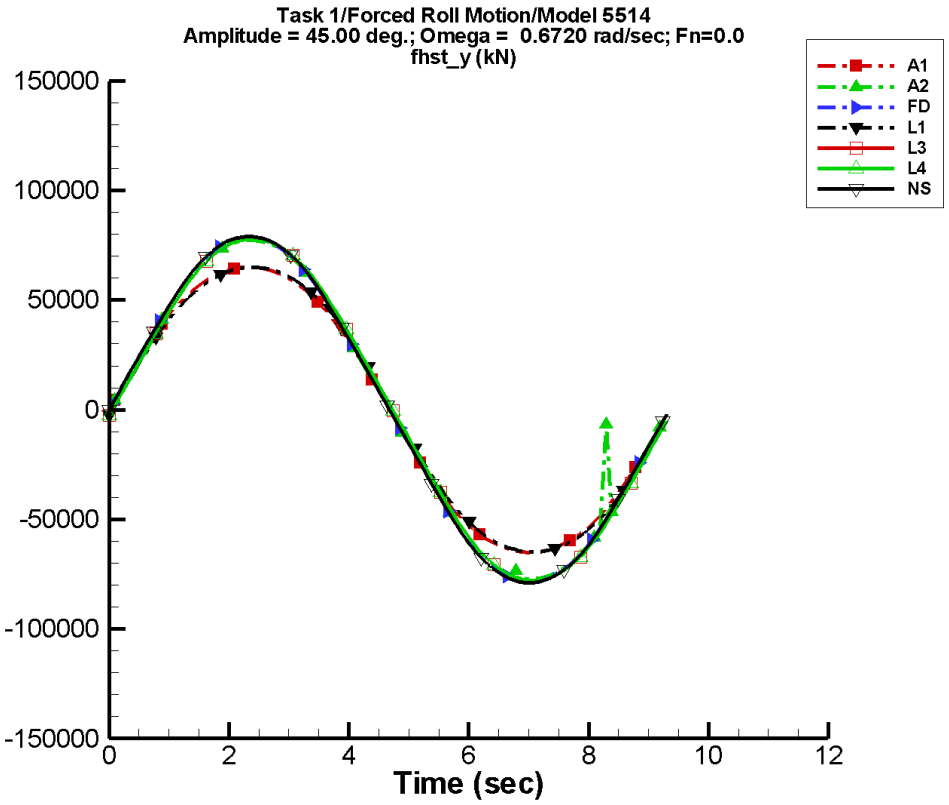
Figure D–253. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–505. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 27.1 | 4.65E+04 | 0 | 64.2 | 44 |
| A2 | 16.5 | 5.00E+04 | 0 | 257. | -164 |
| FD | -54.8 | 5.03E+04 | 0 | 102. | -34 |
| L1 | 33.7 | 4.65E+04 | -2 | 62.2 | 25 |
| L3 | -41.4 | 5.00E+04 | -2 | 80.5 | -157 |
| L4 | -41.4 | 5.00E+04 | -2 | 80.5 | -157 |
| NF | — | — | — | — | — |
| NS | 8.55E-03 | 5.02E+04 | 0 | 1.96E-02 | 14 |

Table D–506. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E+04 | 4.60E+04 | -4.55E+04 | 4.55E+04 |
| A2 | -5.12E+04 | 5.12E+04 | -5.06E+04 | 5.06E+04 |
| FD | -5.09E+04 | 5.09E+04 | -5.06E+04 | 5.03E+04 |
| L1 | -4.59E+04 | 4.59E+04 | -4.57E+04 | 4.57E+04 |
| L3 | -5.07E+04 | 5.07E+04 | -5.05E+04 | 5.05E+04 |
| L4 | -5.07E+04 | 5.07E+04 | -5.05E+04 | 5.05E+04 |
| NF | — | — | — | — |
| NS | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |




Data identically zero, insufficient, or not available from NFA.

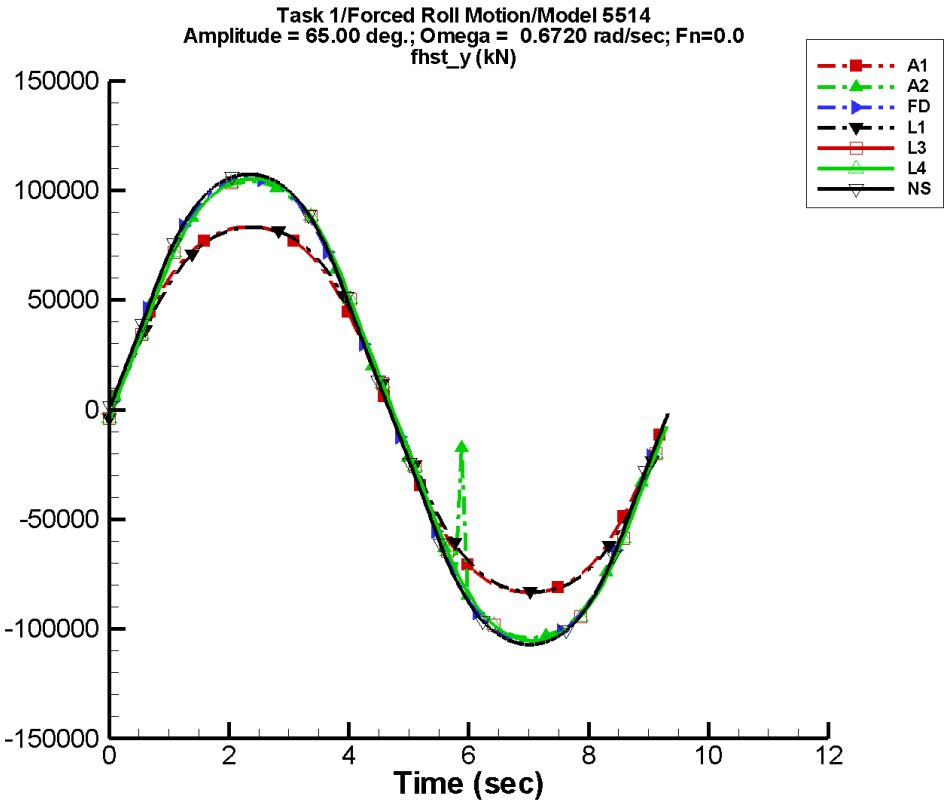
Figure D–254. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–507. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 89.7 | 6.69E+04 | 0 | 212. | 44 |
| A2 | 454. | 7.62E+04 | 0 | 983. | -172 |
| FD | -87.4 | 7.76E+04 | 0 | 182. | -47 |
| L1 | 110. | 6.68E+04 | -2 | 206. | 25 |
| L3 | -72.3 | 7.72E+04 | -2 | 157. | -137 |
| L4 | -72.3 | 7.72E+04 | -2 | 157. | -137 |
| NF | — | — | — | — | — |
| NS | 4.08E-02 | 7.82E+04 | 0 | 7.47E-02 | -93 |

Table D–508. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.50E+04 | 6.50E+04 | -6.44E+04 | 6.44E+04 |
| A2 | -7.73E+04 | 7.74E+04 | -7.62E+04 | 7.65E+04 |
| FD | -7.82E+04 | 7.82E+04 | -7.78E+04 | 7.73E+04 |
| L1 | -6.49E+04 | 6.49E+04 | -6.47E+04 | 6.47E+04 |
| L3 | -7.79E+04 | 7.79E+04 | -7.76E+04 | 7.76E+04 |
| L4 | -7.79E+04 | 7.79E+04 | -7.76E+04 | 7.76E+04 |
| NF | — | — | — | — |
| NS | -7.90E+04 | 7.90E+04 | -7.89E+04 | 7.89E+04 |




Data identically zero, insufficient, or not available from NFA.

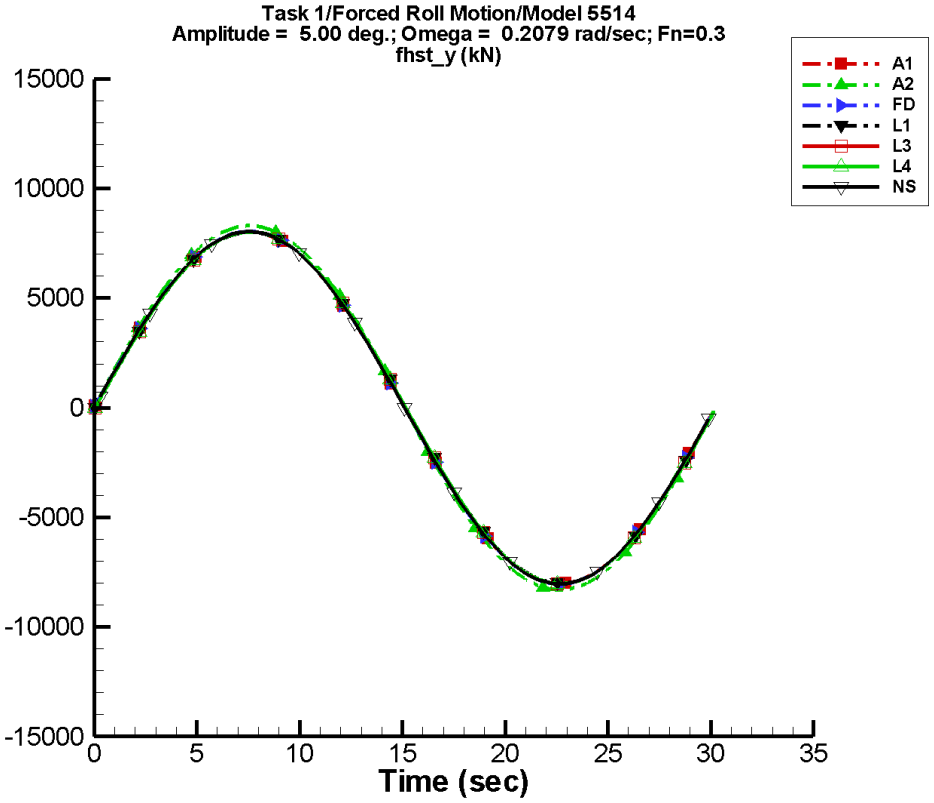
Figure D–255. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–509. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 259. | 8.86E+04 | 0 | 616. | 45 |
| A2 | 703. | 1.06E+05 | -1 | 1.47E+03 | -1 |
| FD | 127. | 1.09E+05 | 0 | 250. | 174 |
| L1 | 315. | 8.86E+04 | -2 | 595. | 26 |
| L3 | 97.6 | 1.09E+05 | -2 | 248. | -22 |
| L4 | 97.6 | 1.09E+05 | -2 | 248. | -22 |
| NF | — | — | — | — | — |
| NS | 70.5 | 1.10E+05 | 0 | 83.0 | -90 |

Table D–510. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.33E+04 | 8.33E+04 | -8.28E+04 | 8.28E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.03E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.06E+05 | 1.05E+05 |
| L1 | -8.32E+04 | 8.32E+04 | -8.30E+04 | 8.30E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |




Data identically zero, insufficient, or not available from NFA.

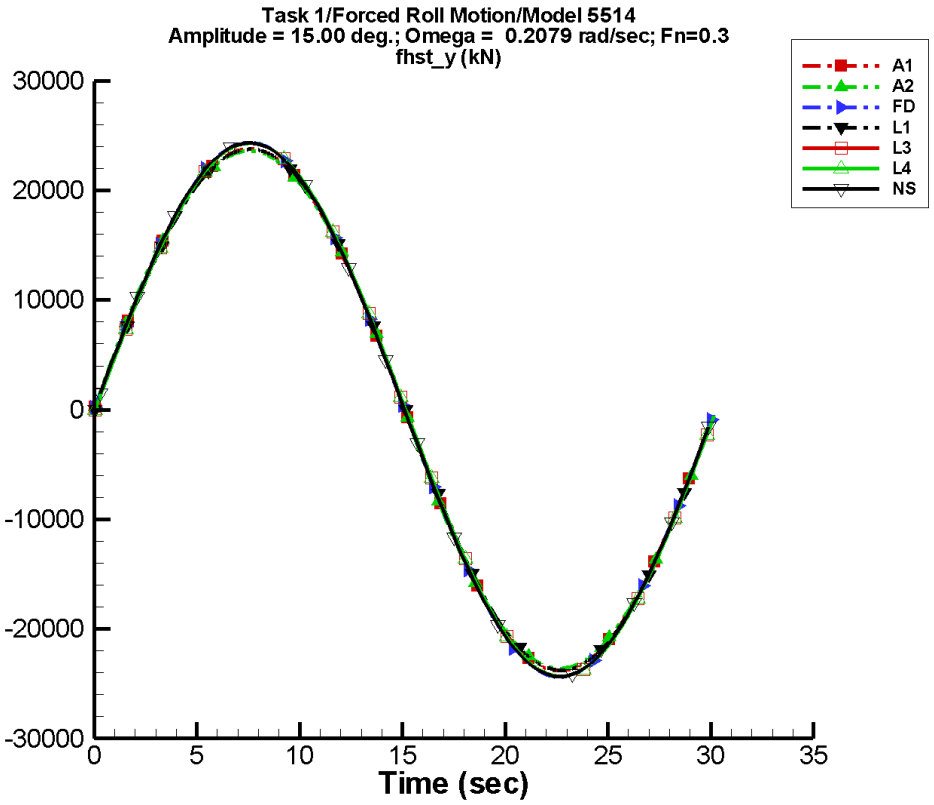
Figure D–256. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–511. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.89E-02 | 8.02E+03 | 0 | 0.405 | 58 |
| A2 | 1.31 | 8.34E+03 | 0 | 6.74 | 61 |
| FD | -5.41E-03 | 8.04E+03 | 0 | 4.11E-02 | 154 |
| L1 | 0.145 | 8.00E+03 | -1 | 0.608 | 87 |
| L3 | -0.145 | 8.02E+03 | -1 | 0.531 | -93 |
| L4 | -0.145 | 8.02E+03 | -1 | 0.531 | -93 |
| NF | — | — | — | — | — |
| NS | -8.15E-05 | 8.03E+03 | 0 | 6.10E-04 | 8 |

Table D–512. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+03 | 8.02E+03 | -8.01E+03 | 8.02E+03 |
| A2 | -8.30E+03 | 8.30E+03 | -8.29E+03 | 8.30E+03 |
| FD | -8.04E+03 | 8.04E+03 | -8.03E+03 | 8.03E+03 |
| L1 | -8.00E+03 | 8.00E+03 | -8.00E+03 | 8.00E+03 |
| L3 | -8.02E+03 | 8.02E+03 | -8.02E+03 | 8.02E+03 |
| L4 | -8.02E+03 | 8.02E+03 | -8.02E+03 | 8.02E+03 |
| NF | — | — | — | — |
| NS | -8.03E+03 | 8.03E+03 | -7.95E+03 | 7.95E+03 |




Data identically zero, insufficient, or not available from NFA.

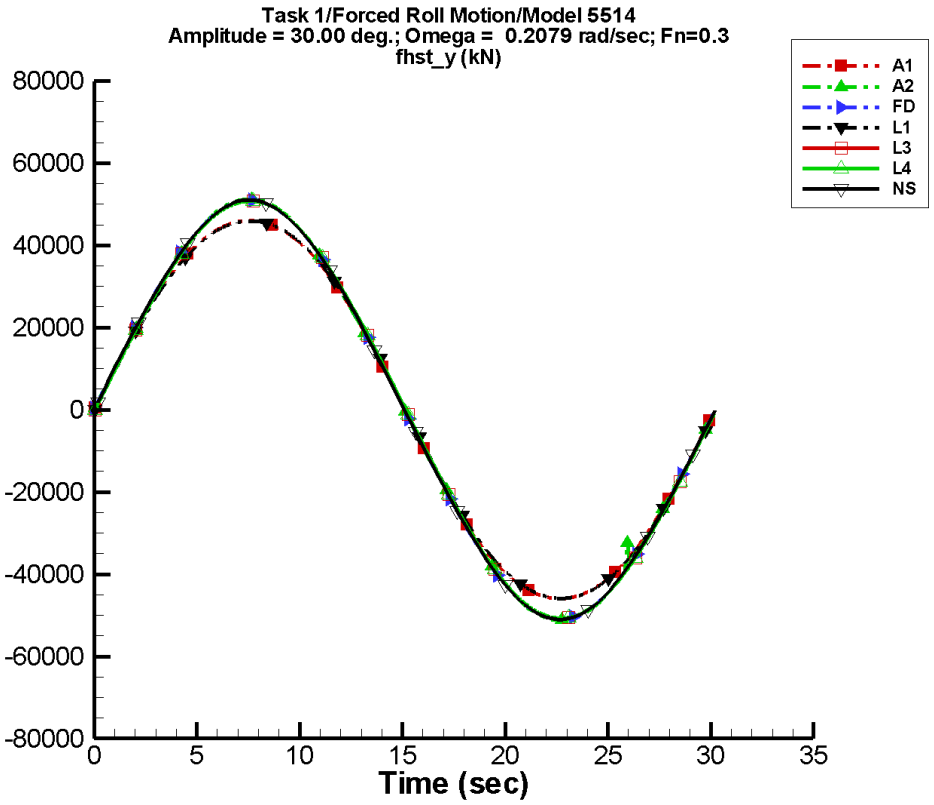
Figure D–257. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–513. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.72 | 2.39E+04 | 0 | 10.8 | 59 |
| A2 | 10.3 | 2.38E+04 | 0 | 51.0 | 67 |
| FD | -2.11 | 2.43E+04 | 0 | 10.7 | -124 |
| L1 | 4.15 | 2.38E+04 | -1 | 16.4 | 87 |
| L3 | -4.33 | 2.42E+04 | -1 | 17.1 | -93 |
| L4 | -4.33 | 2.42E+04 | -1 | 17.1 | -93 |
| NF | — | — | — | — | — |
| NS | 2.64E-04 | 2.43E+04 | 0 | 2.48E-03 | 57 |

Table D–514. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.38E+04 | 2.38E+04 | -2.38E+04 | 2.38E+04 |
| A2 | -2.36E+04 | 2.36E+04 | -2.36E+04 | 2.36E+04 |
| FD | -2.44E+04 | 2.44E+04 | -2.44E+04 | 2.44E+04 |
| L1 | -2.38E+04 | 2.38E+04 | -2.38E+04 | 2.38E+04 |
| L3 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| L4 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| NF | — | — | — | — |
| NS | -2.43E+04 | 2.43E+04 | -2.41E+04 | 2.41E+04 |




Data identically zero, insufficient, or not available from NFA.

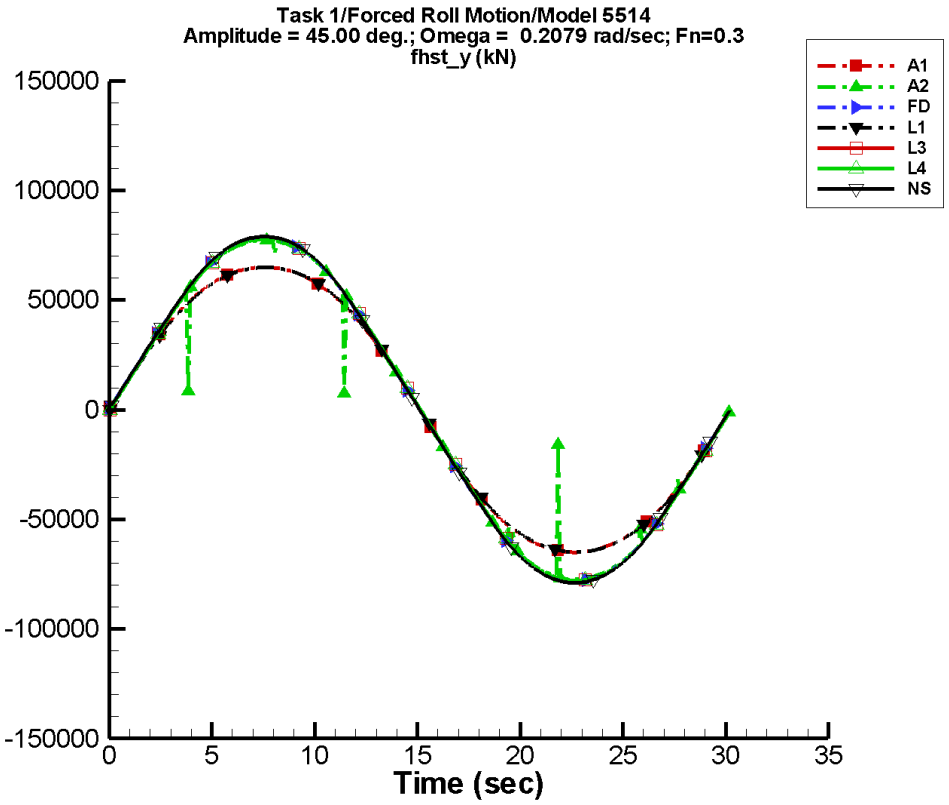
Figure D–258. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–515. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 13.7 | 4.65E+04 | 0 | 85.5 | 59 |
| A2 | -1.08 | 5.02E+04 | 0 | 201. | -136 |
| FD | -21.0 | 5.02E+04 | 0 | 106. | -123 |
| L1 | 32.8 | 4.64E+04 | -1 | 129. | 87 |
| L3 | -42.3 | 5.00E+04 | -1 | 167. | -93 |
| L4 | -42.3 | 5.00E+04 | -1 | 167. | -93 |
| NF | — | — | — | — | — |
| NS | -1.31E-03 | 5.02E+04 | 0 | 2.15E-03 | 67 |

Table D–516. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E+04 | 4.60E+04 | -4.59E+04 | 4.60E+04 |
| A2 | -5.12E+04 | 5.12E+04 | -5.11E+04 | 5.12E+04 |
| FD | -5.09E+04 | 5.09E+04 | -5.09E+04 | 5.09E+04 |
| L1 | -4.59E+04 | 4.59E+04 | -4.59E+04 | 4.59E+04 |
| L3 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.07E+04 |
| L4 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.07E+04 |
| NF | — | — | — | — |
| NS | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |




Data identically zero, insufficient, or not available from NFA.

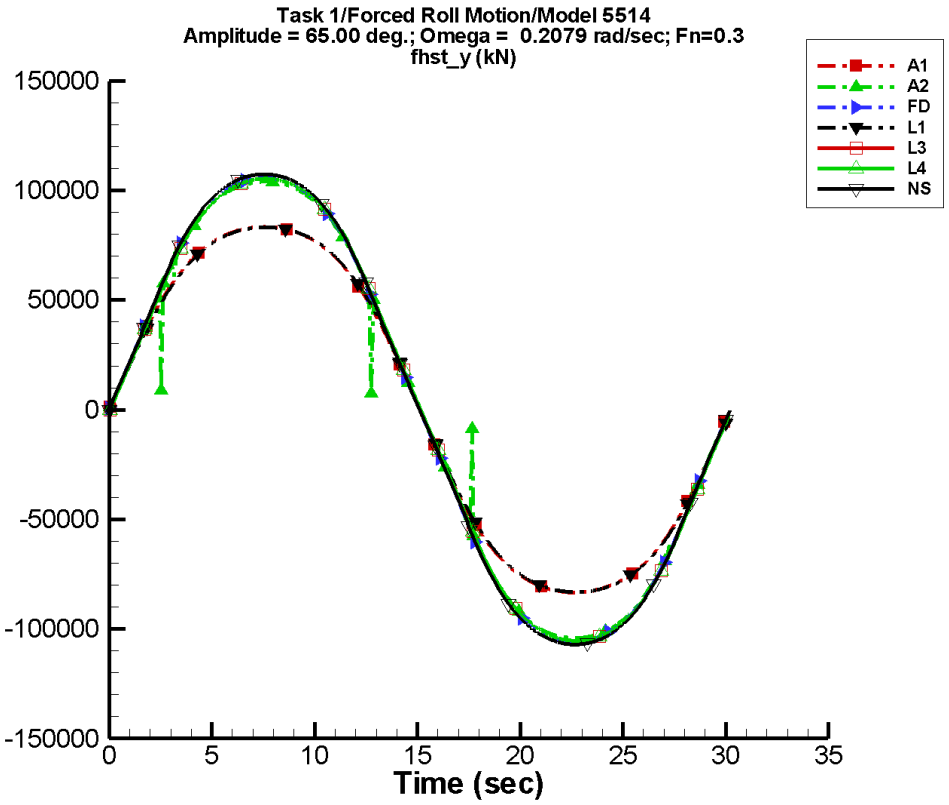
Figure D–259. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–517. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 45.6 | 6.68E+04 | 0 | 283. | 59 |
| A2 | 0.539 | 7.60E+04 | 0 | 560. | -71 |
| FD | -41.8 | 7.76E+04 | 0 | 201. | -112 |
| L1 | 108. | 6.67E+04 | -1 | 427. | 87 |
| L3 | -80.9 | 7.73E+04 | -1 | 309. | -94 |
| L4 | -80.9 | 7.73E+04 | -1 | 309. | -94 |
| NF | — | — | — | — | — |
| NS | 9.39E-02 | 7.82E+04 | 0 | 0.156 | -90 |

Table D–518. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.50E+04 | 6.50E+04 | -6.50E+04 | 6.51E+04 |
| A2 | -7.74E+04 | 7.77E+04 | -7.80E+04 | 7.74E+04 |
| FD | -7.82E+04 | 7.82E+04 | -7.81E+04 | 7.81E+04 |
| L1 | -6.49E+04 | 6.49E+04 | -6.49E+04 | 6.49E+04 |
| L3 | -7.79E+04 | 7.79E+04 | -7.79E+04 | 7.79E+04 |
| L4 | -7.79E+04 | 7.79E+04 | -7.79E+04 | 7.79E+04 |
| NF | — | — | — | — |
| NS | -7.90E+04 | 7.90E+04 | -7.89E+04 | 7.89E+04 |




Data identically zero, insufficient, or not available from NFA.

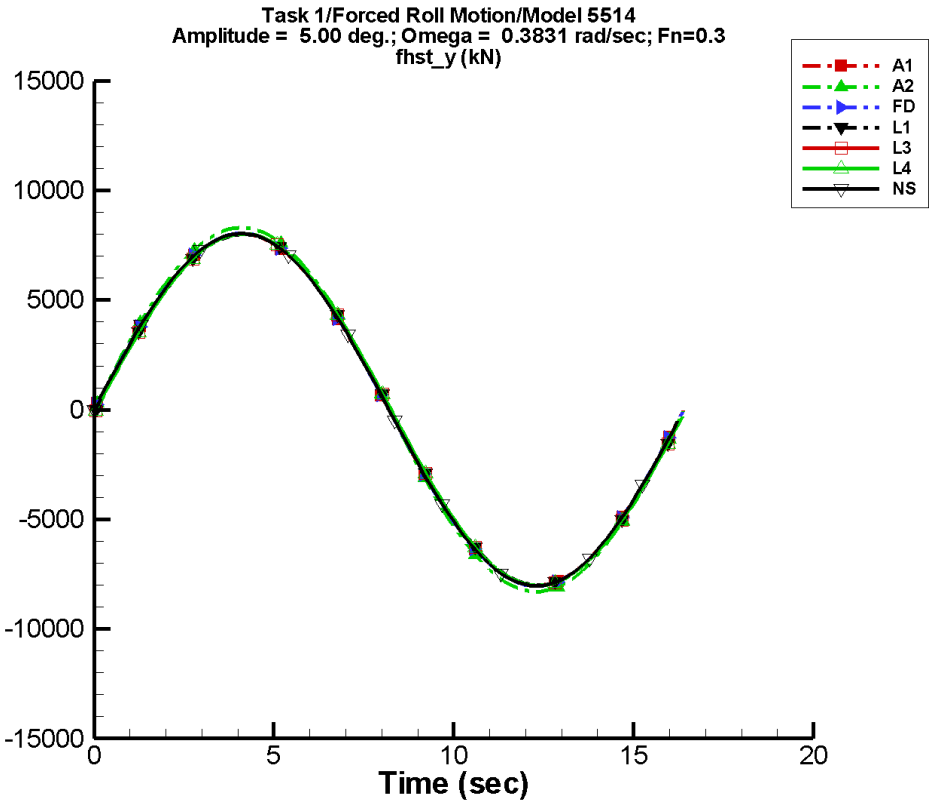
Figure D–260. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–519. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 133. | 8.84E+04 | 0 | 819. | 59 |
| A2 | -92.7 | 1.07E+05 | 0 | 494. | 5 |
| FD | 20.1 | 1.09E+05 | 0 | 228. | 26 |
| L1 | 314. | 8.83E+04 | -1 | 1.24E+03 | 87 |
| L3 | 81.7 | 1.08E+05 | -1 | 354. | 90 |
| L4 | 81.7 | 1.08E+05 | -1 | 354. | 90 |
| NF | — | — | — | — | — |
| NS | 71.5 | 1.10E+05 | 0 | 84.8 | -90 |

Table D–520. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.34E+04 | 8.34E+04 | -8.33E+04 | 8.35E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.06E+05 | 1.06E+05 |
| L1 | -8.32E+04 | 8.32E+04 | -8.32E+04 | 8.32E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |




Data identically zero, insufficient, or not available from NFA.

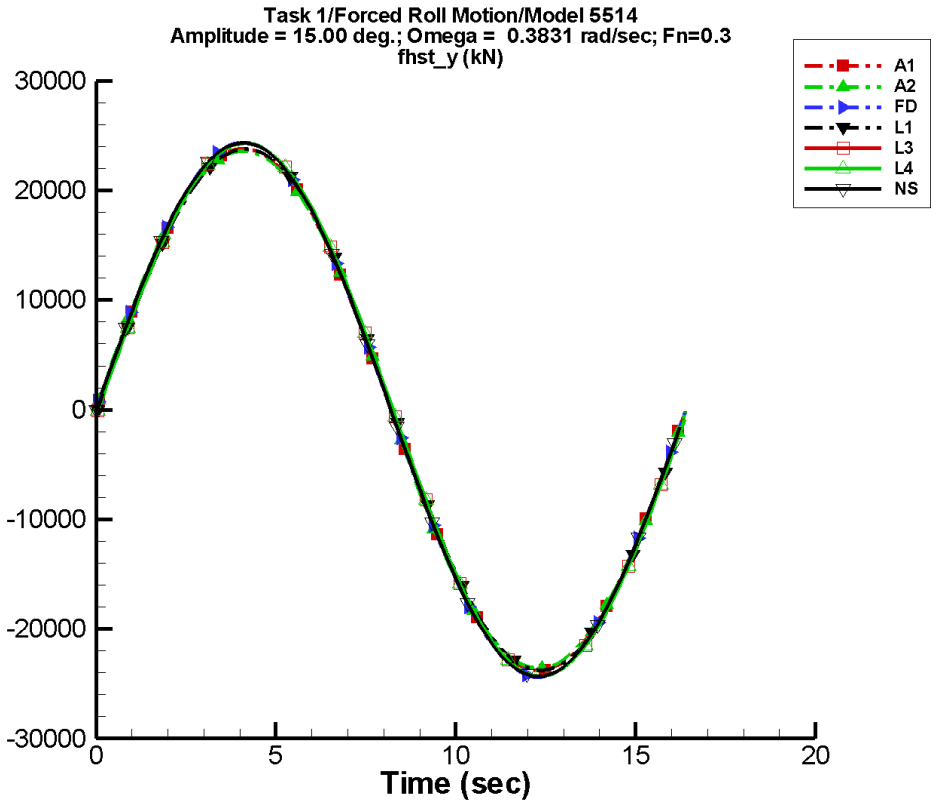
Figure D–261. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–521. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.39E-02 | 8.02E+03 | 0 | 0.431 | 60 |
| A2 | 1.20 | 8.34E+03 | 0 | 6.97 | 60 |
| FD | -2.27E-02 | 8.04E+03 | 0 | 5.71E-02 | -48 |
| L1 | 0.197 | 8.00E+03 | -1 | 0.285 | 28 |
| L3 | -9.23E-02 | 8.02E+03 | -1 | 0.251 | -148 |
| L4 | -9.23E-02 | 8.02E+03 | -1 | 0.251 | -148 |
| NF | — | — | — | — | — |
| NS | 3.60E-04 | 8.03E+03 | 0 | 1.01E-03 | -35 |

Table D–522. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+03 | 8.02E+03 | -7.99E+03 | 8.04E+03 |
| A2 | -8.30E+03 | 8.30E+03 | -8.27E+03 | 8.33E+03 |
| FD | -8.04E+03 | 8.04E+03 | -8.01E+03 | 8.01E+03 |
| L1 | -8.00E+03 | 8.00E+03 | -7.99E+03 | 7.99E+03 |
| L3 | -8.02E+03 | 8.02E+03 | -8.01E+03 | 8.01E+03 |
| L4 | -8.02E+03 | 8.02E+03 | -8.01E+03 | 8.01E+03 |
| NF | — | — | — | — |
| NS | -8.03E+03 | 8.03E+03 | -7.95E+03 | 7.95E+03 |




Data identically zero, insufficient, or not available from NFA.

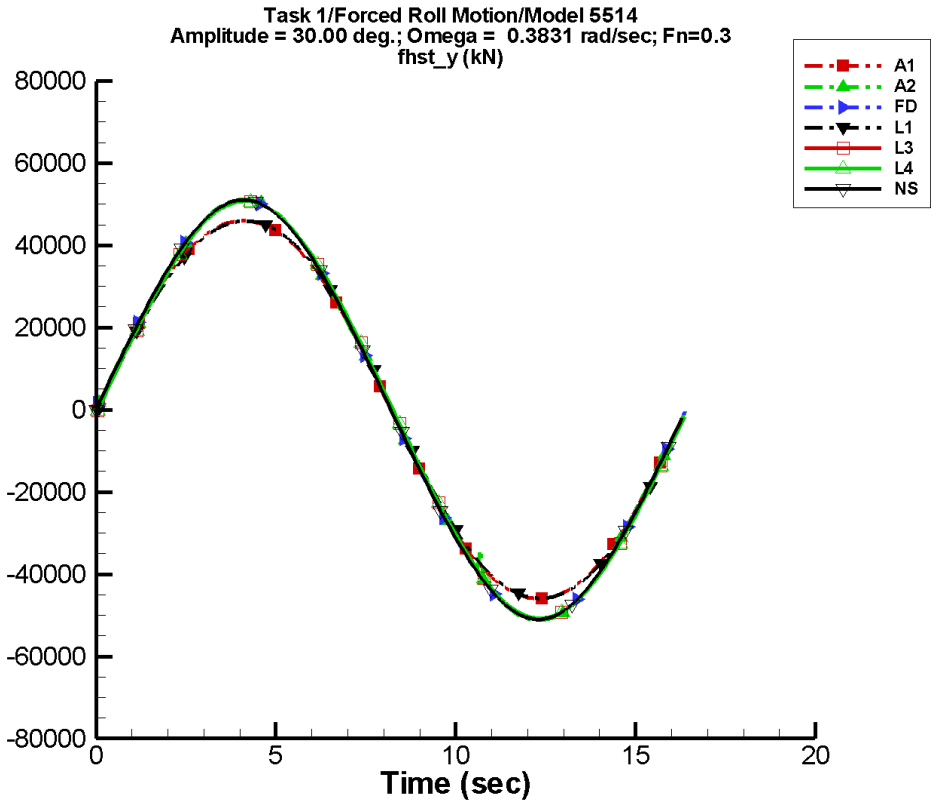
Figure D–262. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–523. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.43 | 2.39E+04 | 0 | 11.6 | 60 |
| A2 | 9.79 | 2.38E+04 | 0 | 52.2 | 65 |
| FD | -2.15 | 2.43E+04 | 0 | 14.6 | -104 |
| L1 | 4.25 | 2.38E+04 | -1 | 7.67 | 28 |
| L3 | -3.95 | 2.42E+04 | -1 | 7.96 | -152 |
| L4 | -3.95 | 2.42E+04 | -1 | 7.96 | -152 |
| NF | — | — | — | — | — |
| NS | 3.54E-04 | 2.43E+04 | 0 | 3.51E-03 | -15 |

Table D–524. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.39E+04 |
| A2 | -2.36E+04 | 2.36E+04 | -2.35E+04 | 2.37E+04 |
| FD | -2.44E+04 | 2.44E+04 | -2.43E+04 | 2.43E+04 |
| L1 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.37E+04 |
| L3 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| L4 | -2.43E+04 | 2.43E+04 | -2.43E+04 | 2.43E+04 |
| NF | — | — | — | — |
| NS | -2.43E+04 | 2.43E+04 | -2.41E+04 | 2.41E+04 |




Data identically zero, insufficient, or not available from NFA.

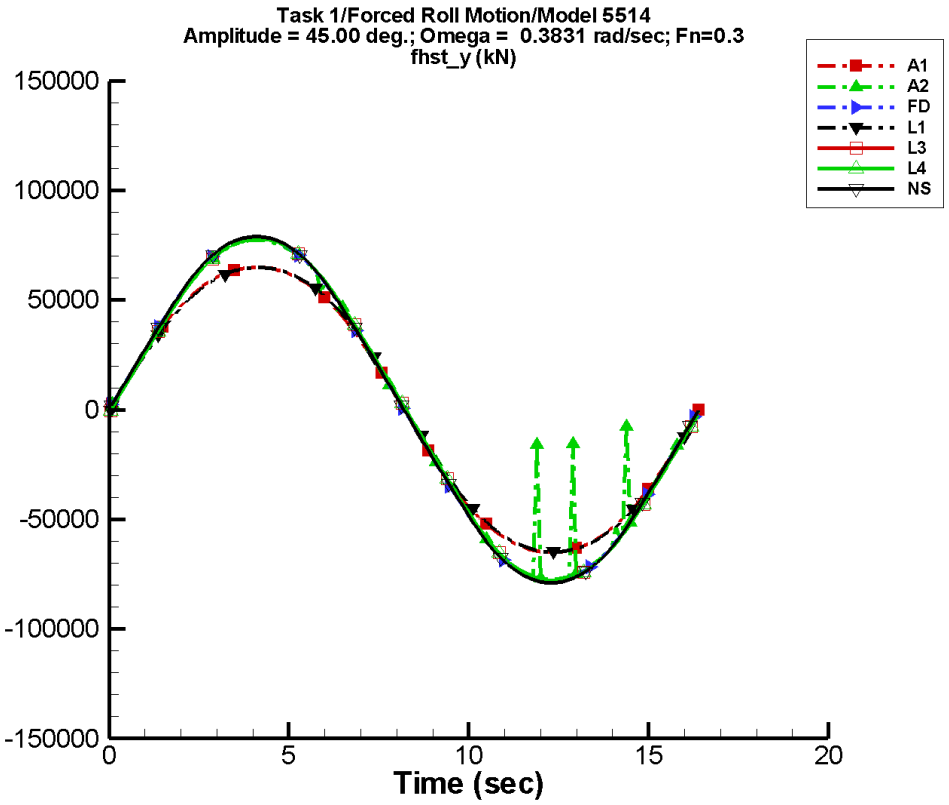
Figure D–263. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–525. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 11.4 | 4.65E+04 | 0 | 91.4 | 60 |
| A2 | 17.6 | 5.01E+04 | 0 | 161. | -106 |
| FD | -21.4 | 5.02E+04 | 0 | 145. | -104 |
| L1 | 32.3 | 4.65E+04 | -1 | 60.6 | 28 |
| L3 | -40.5 | 5.00E+04 | -1 | 78.0 | -153 |
| L4 | -40.5 | 5.00E+04 | -1 | 78.0 | -153 |
| NF | — | — | — | — | — |
| NS | -2.03E-04 | 5.02E+04 | 0 | 1.34E-03 | 101 |

Table D–526. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E+04 | 4.60E+04 | -4.58E+04 | 4.61E+04 |
| A2 | -5.12E+04 | 5.12E+04 | -5.10E+04 | 5.13E+04 |
| FD | -5.09E+04 | 5.09E+04 | -5.07E+04 | 5.07E+04 |
| L1 | -4.59E+04 | 4.59E+04 | -4.58E+04 | 4.58E+04 |
| L3 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.06E+04 |
| L4 | -5.07E+04 | 5.07E+04 | -5.07E+04 | 5.06E+04 |
| NF | — | — | — | — |
| NS | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |




Data identically zero, insufficient, or not available from NFA.

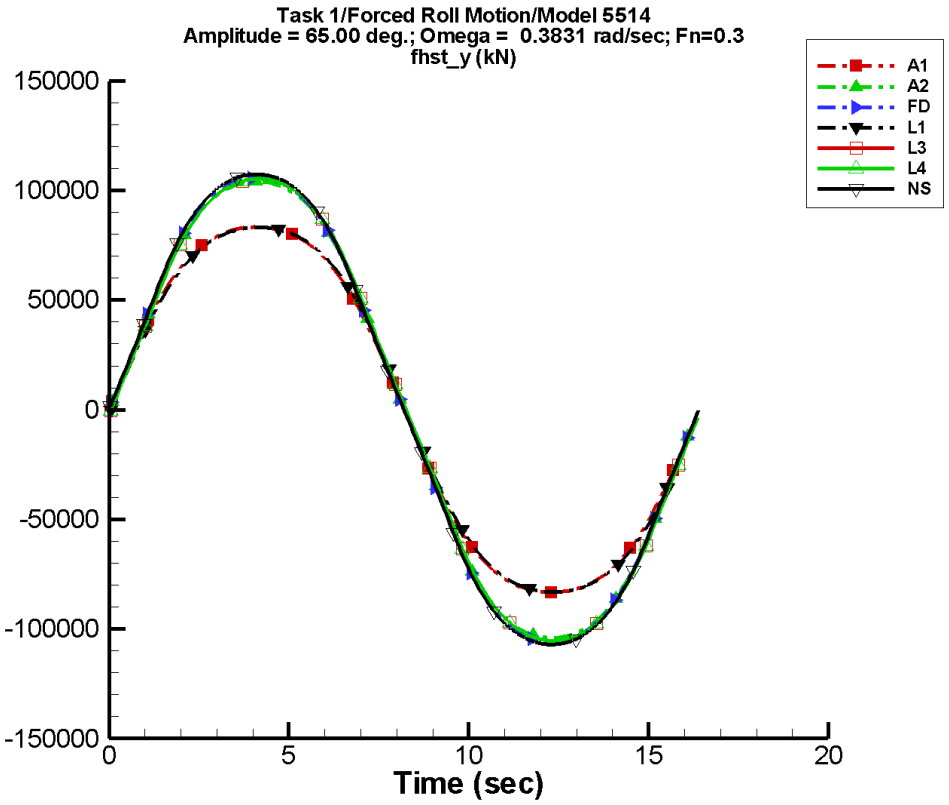
Figure D–264. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–527. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 37.7 | 6.68E+04 | 0 | 302. | 60 |
| A2 | 1.01E+03 | 7.50E+04 | 0 | 1.58E+03 | -114 |
| FD | -32.3 | 7.76E+04 | 0 | 251. | -108 |
| L1 | 106. | 6.68E+04 | -1 | 201. | 29 |
| L3 | -85.1 | 7.72E+04 | -1 | 164. | -145 |
| L4 | -85.1 | 7.72E+04 | -1 | 164. | -145 |
| NF | — | — | — | — | — |
| NS | -0.127 | 7.82E+04 | 0 | 0.202 | 90 |

Table D–528. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.50E+04 | 6.50E+04 | -6.48E+04 | 6.52E+04 |
| A2 | -7.74E+04 | 7.74E+04 | -7.23E+04 | 7.76E+04 |
| FD | -7.82E+04 | 7.82E+04 | -7.79E+04 | 7.79E+04 |
| L1 | -6.49E+04 | 6.49E+04 | -6.48E+04 | 6.48E+04 |
| L3 | -7.79E+04 | 7.79E+04 | -7.78E+04 | 7.78E+04 |
| L4 | -7.79E+04 | 7.79E+04 | -7.78E+04 | 7.78E+04 |
| NF | — | — | — | — |
| NS | -7.90E+04 | 7.90E+04 | -7.89E+04 | 7.89E+04 |




Data identically zero, insufficient, or not available from NFA.

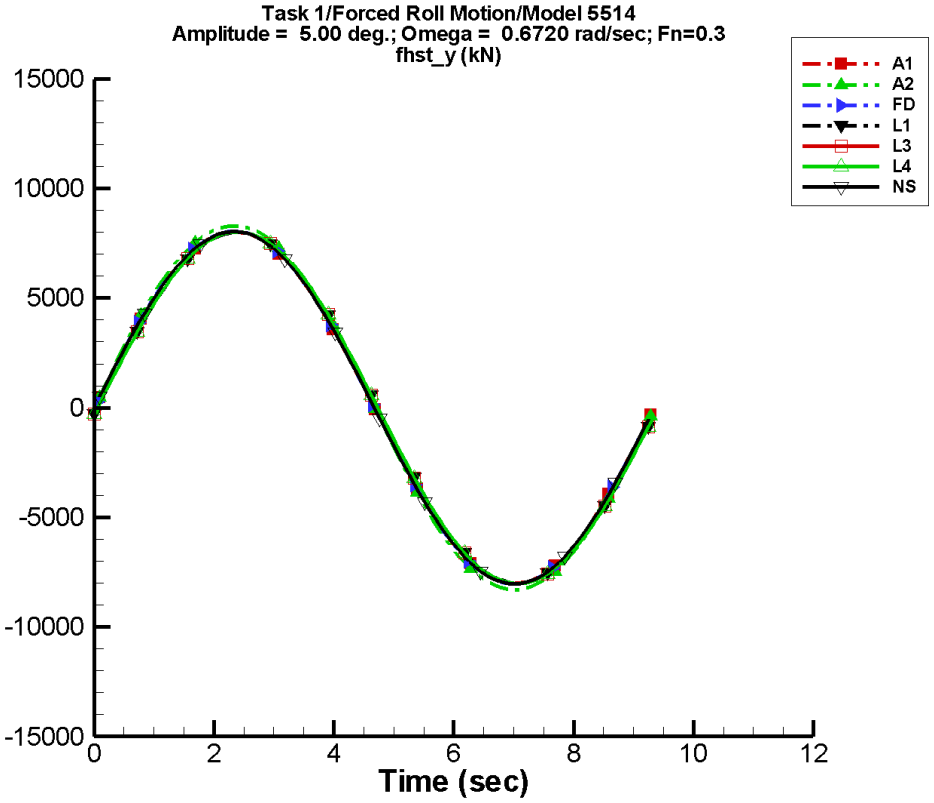
Figure D–265. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–529. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 110. | 8.83E+04 | 0 | 874. | 61 |
| A2 | -20.6 | 1.07E+05 | 0 | 327. | 48 |
| FD | 49.0 | 1.09E+05 | 0 | 323. | 82 |
| L1 | 306. | 8.86E+04 | -1 | 582. | 29 |
| L3 | 62.2 | 1.09E+05 | -1 | 169. | -14 |
| L4 | 62.2 | 1.09E+05 | -1 | 169. | -14 |
| NF | — | — | — | — | — |
| NS | 72.2 | 1.10E+05 | 0 | 85.6 | -90 |

Table D–530. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.34E+04 | 8.34E+04 | -8.32E+04 | 8.37E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.04E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.05E+05 | 1.05E+05 |
| L1 | -8.32E+04 | 8.32E+04 | -8.31E+04 | 8.31E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |




Data identically zero, insufficient, or not available from NFA.

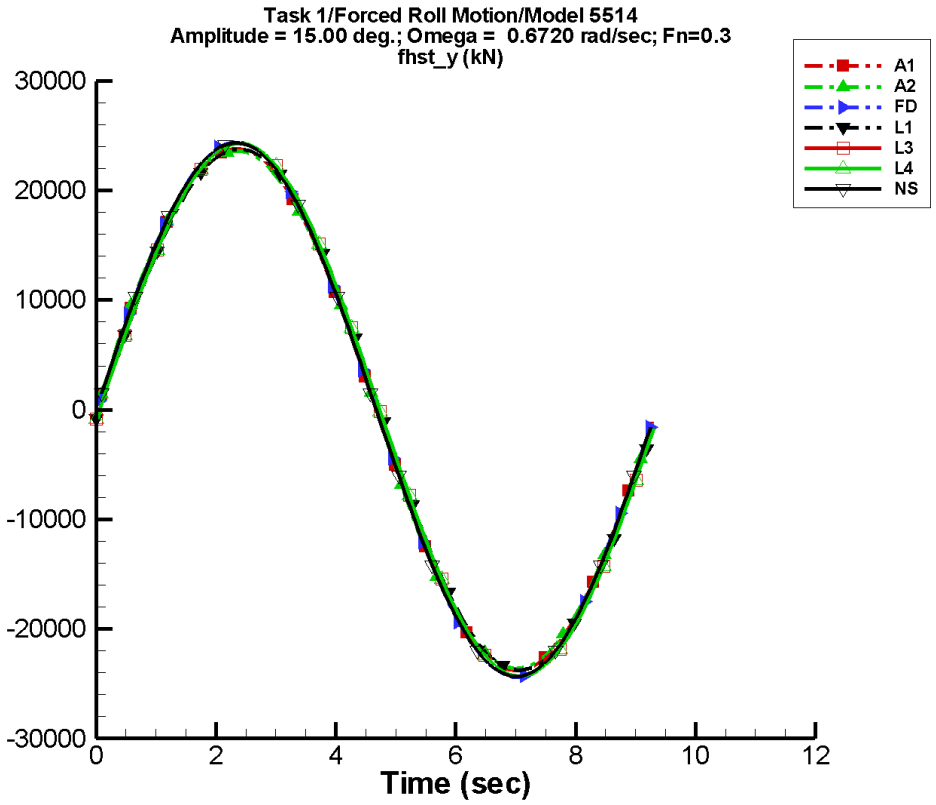
Figure D–266. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–531. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.120 | 8.02E+03 | 0 | 0.308 | 41 |
| A2 | 2.21 | 8.34E+03 | 0 | 5.13 | 41 |
| FD | -3.99E-02 | 8.04E+03 | 0 | 4.26E-02 | 28 |
| L1 | 0.302 | 8.00E+03 | -2 | 0.290 | 27 |
| L3 | 1.23E-02 | 8.02E+03 | -2 | 0.260 | -153 |
| L4 | 1.23E-02 | 8.02E+03 | -2 | 0.260 | -153 |
| NF | — | — | — | — | — |
| NS | -9.13E-04 | 8.03E+03 | 0 | 1.06E-03 | 56 |

Table D–532. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.02E+03 | 8.01E+03 | -7.93E+03 | 7.92E+03 |
| A2 | -8.30E+03 | 8.30E+03 | -8.21E+03 | 8.21E+03 |
| FD | -8.04E+03 | 8.04E+03 | -8.00E+03 | 7.95E+03 |
| L1 | -8.00E+03 | 8.00E+03 | -7.97E+03 | 7.97E+03 |
| L3 | -8.02E+03 | 8.02E+03 | -7.99E+03 | 7.99E+03 |
| L4 | -8.02E+03 | 8.02E+03 | -7.99E+03 | 7.99E+03 |
| NF | — | — | — | — |
| NS | -8.03E+03 | 8.03E+03 | -7.95E+03 | 7.95E+03 |




Data identically zero, insufficient, or not available from NFA.

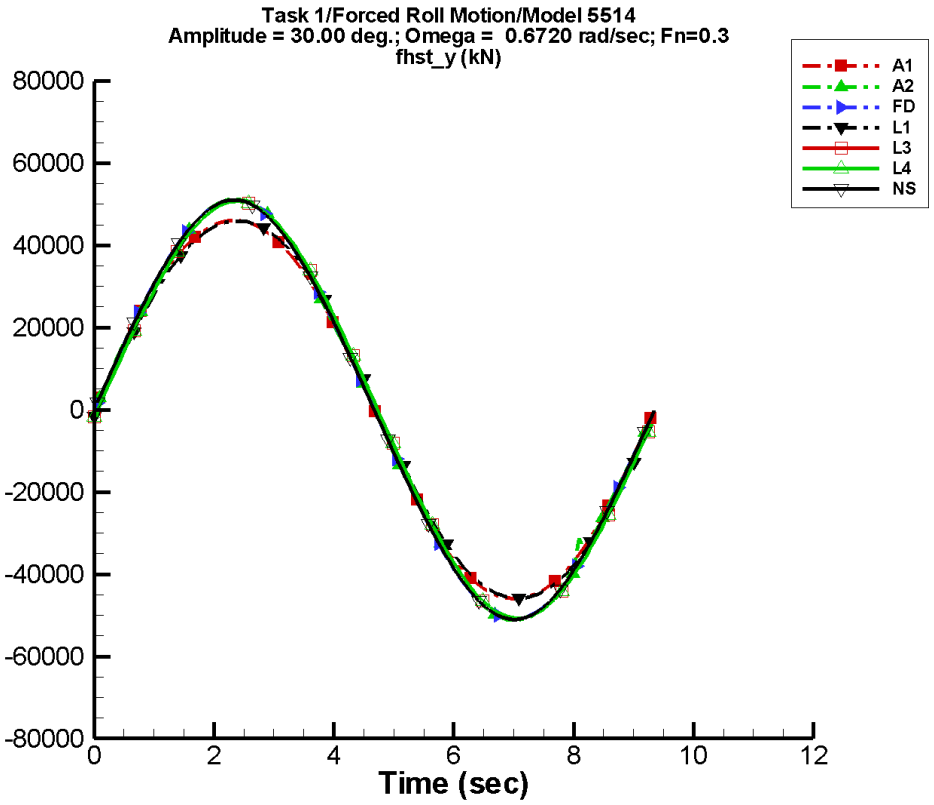
Figure D–267. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–533. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.42 | 2.39E+04 | 0 | 8.13 | 44 |
| A2 | 15.1 | 2.38E+04 | 0 | 41.6 | 54 |
| FD | -5.58 | 2.43E+04 | 0 | 10.3 | -33 |
| L1 | 4.61 | 2.38E+04 | -2 | 7.86 | 25 |
| L3 | -3.88 | 2.42E+04 | -2 | 8.24 | -157 |
| L4 | -3.88 | 2.42E+04 | -2 | 8.24 | -157 |
| NF | — | — | — | — | — |
| NS | -1.20E-03 | 2.43E+04 | 0 | 3.42E-03 | 54 |

Table D–534. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.38E+04 | 2.38E+04 | -2.35E+04 | 2.35E+04 |
| A2 | -2.36E+04 | 2.36E+04 | -2.33E+04 | 2.33E+04 |
| FD | -2.44E+04 | 2.44E+04 | -2.42E+04 | 2.41E+04 |
| L1 | -2.38E+04 | 2.38E+04 | -2.37E+04 | 2.37E+04 |
| L3 | -2.43E+04 | 2.43E+04 | -2.42E+04 | 2.42E+04 |
| L4 | -2.43E+04 | 2.43E+04 | -2.42E+04 | 2.42E+04 |
| NF | — | — | — | — |
| NS | -2.43E+04 | 2.43E+04 | -2.41E+04 | 2.41E+04 |




Data identically zero, insufficient, or not available from NFA.

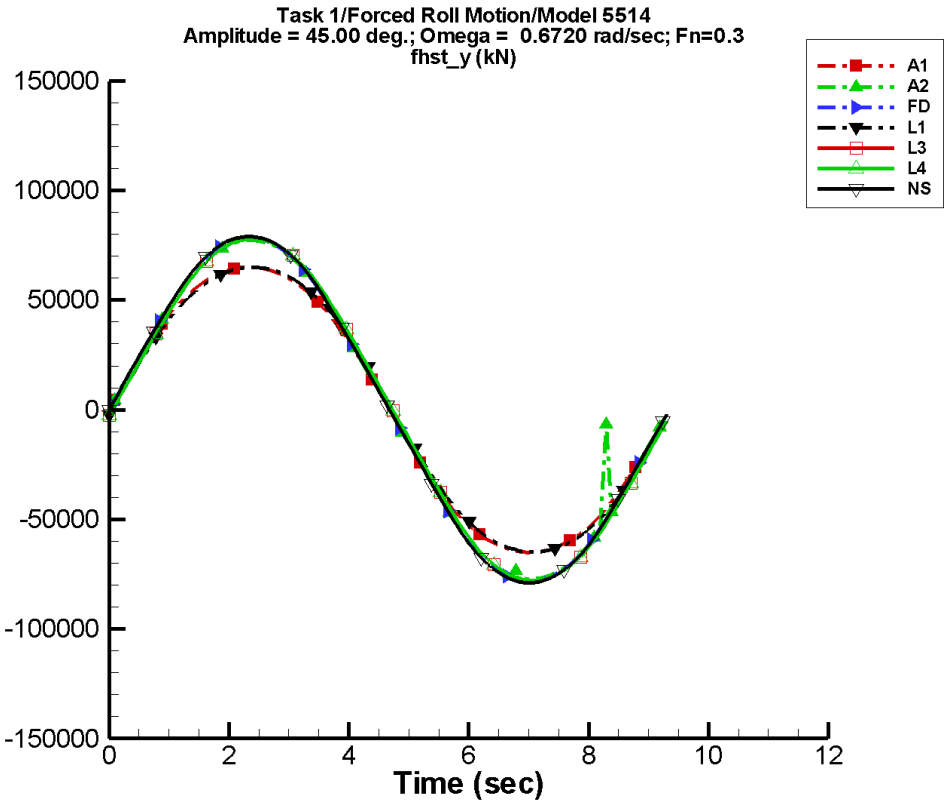
Figure D–268. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–535. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 27.1 | 4.65E+04 | 0 | 64.2 | 44 |
| A2 | 16.5 | 5.00E+04 | 0 | 257. | -164 |
| FD | -54.8 | 5.03E+04 | 0 | 102. | -34 |
| L1 | 33.7 | 4.65E+04 | -2 | 62.2 | 25 |
| L3 | -41.4 | 5.00E+04 | -2 | 80.5 | -157 |
| L4 | -41.4 | 5.00E+04 | -2 | 80.5 | -157 |
| NF | — | — | — | — | — |
| NS | 8.55E-03 | 5.02E+04 | 0 | 1.96E-02 | 14 |

Table D–536. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E+04 | 4.60E+04 | -4.55E+04 | 4.55E+04 |
| A2 | -5.12E+04 | 5.12E+04 | -5.06E+04 | 5.06E+04 |
| FD | -5.09E+04 | 5.09E+04 | -5.06E+04 | 5.03E+04 |
| L1 | -4.59E+04 | 4.59E+04 | -4.57E+04 | 4.57E+04 |
| L3 | -5.07E+04 | 5.07E+04 | -5.05E+04 | 5.05E+04 |
| L4 | -5.07E+04 | 5.07E+04 | -5.05E+04 | 5.05E+04 |
| NF | — | — | — | — |
| NS | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |




Data identically zero, insufficient, or not available from NFA.

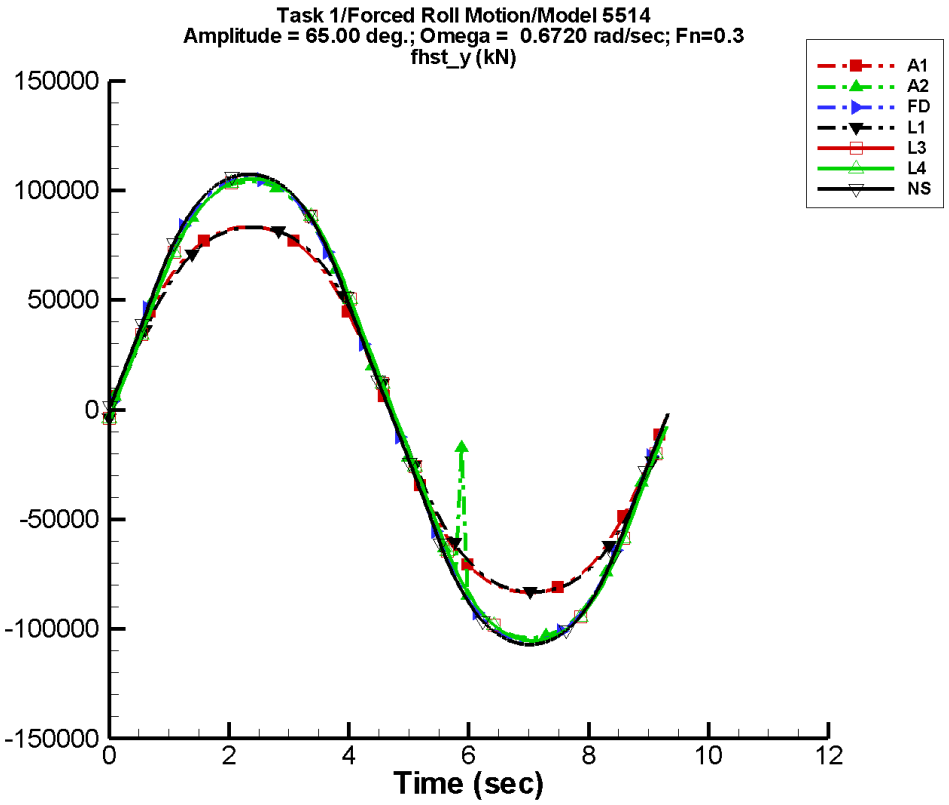
Figure D–269. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–537. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 89.7 | 6.69E+04 | 0 | 212. | 44 |
| A2 | 454. | 7.62E+04 | 0 | 983. | -172 |
| FD | -87.4 | 7.76E+04 | 0 | 182. | -47 |
| L1 | 110. | 6.68E+04 | -2 | 206. | 25 |
| L3 | -72.3 | 7.72E+04 | -2 | 157. | -137 |
| L4 | -72.3 | 7.72E+04 | -2 | 157. | -137 |
| NF | — | — | — | — | — |
| NS | 4.08E-02 | 7.82E+04 | 0 | 7.47E-02 | -93 |

Table D–538. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.50E+04 | 6.50E+04 | -6.44E+04 | 6.44E+04 |
| A2 | -7.73E+04 | 7.74E+04 | -7.62E+04 | 7.65E+04 |
| FD | -7.82E+04 | 7.82E+04 | -7.78E+04 | 7.73E+04 |
| L1 | -6.49E+04 | 6.49E+04 | -6.47E+04 | 6.47E+04 |
| L3 | -7.79E+04 | 7.79E+04 | -7.76E+04 | 7.76E+04 |
| L4 | -7.79E+04 | 7.79E+04 | -7.76E+04 | 7.76E+04 |
| NF | — | — | — | — |
| NS | -7.90E+04 | 7.90E+04 | -7.89E+04 | 7.89E+04 |




Data identically zero, insufficient, or not available from NFA.

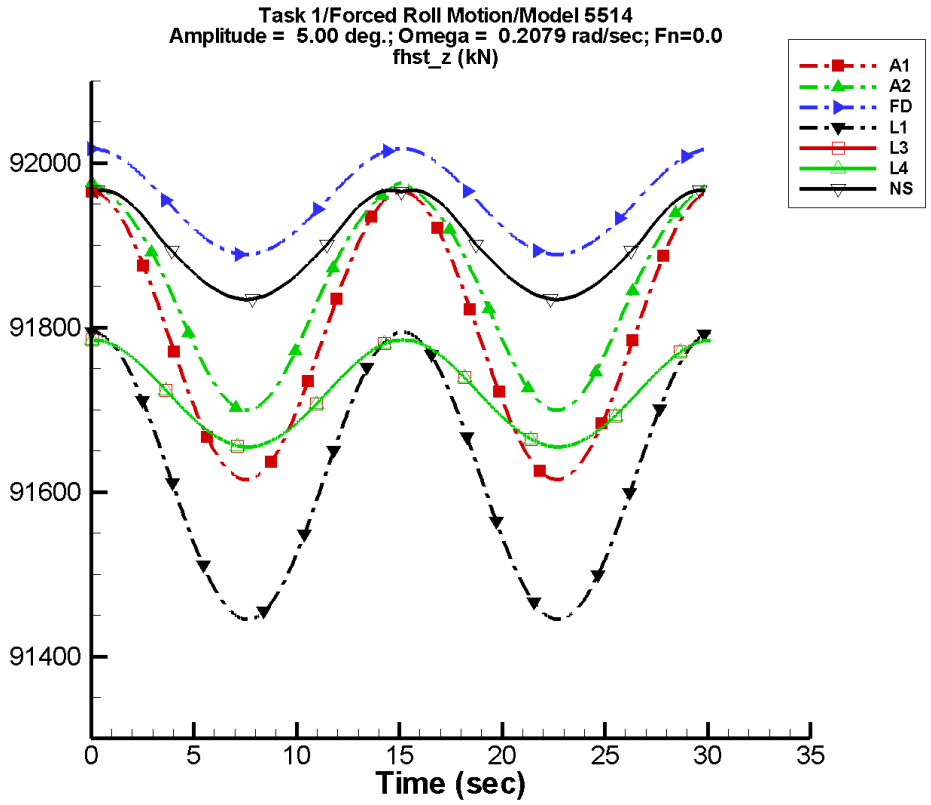
Figure D–270. Time history of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–539. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 259. | 8.86E+04 | 0 | 616. | 45 |
| A2 | 703. | 1.06E+05 | -1 | 1.47E+03 | -1 |
| FD | 127. | 1.09E+05 | 0 | 250. | 174 |
| L1 | 315. | 8.86E+04 | -2 | 595. | 26 |
| L3 | 97.6 | 1.09E+05 | -2 | 248. | -22 |
| L4 | 97.6 | 1.09E+05 | -2 | 248. | -22 |
| NF | — | — | — | — | — |
| NS | 70.5 | 1.10E+05 | 0 | 83.0 | -90 |

Table D–540. Minimum and maximum of of $F_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.33E+04 | 8.33E+04 | -8.28E+04 | 8.28E+04 |
| A2 | -1.04E+05 | 1.04E+05 | -1.04E+05 | 1.03E+05 |
| FD | -1.06E+05 | 1.06E+05 | -1.06E+05 | 1.05E+05 |
| L1 | -8.32E+04 | 8.32E+04 | -8.30E+04 | 8.30E+04 |
| L3 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| L4 | -1.05E+05 | 1.05E+05 | -1.05E+05 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -1.07E+05 | 1.07E+05 | -1.07E+05 | 1.07E+05 |




Data identically zero, insufficient, or not available from NFA.

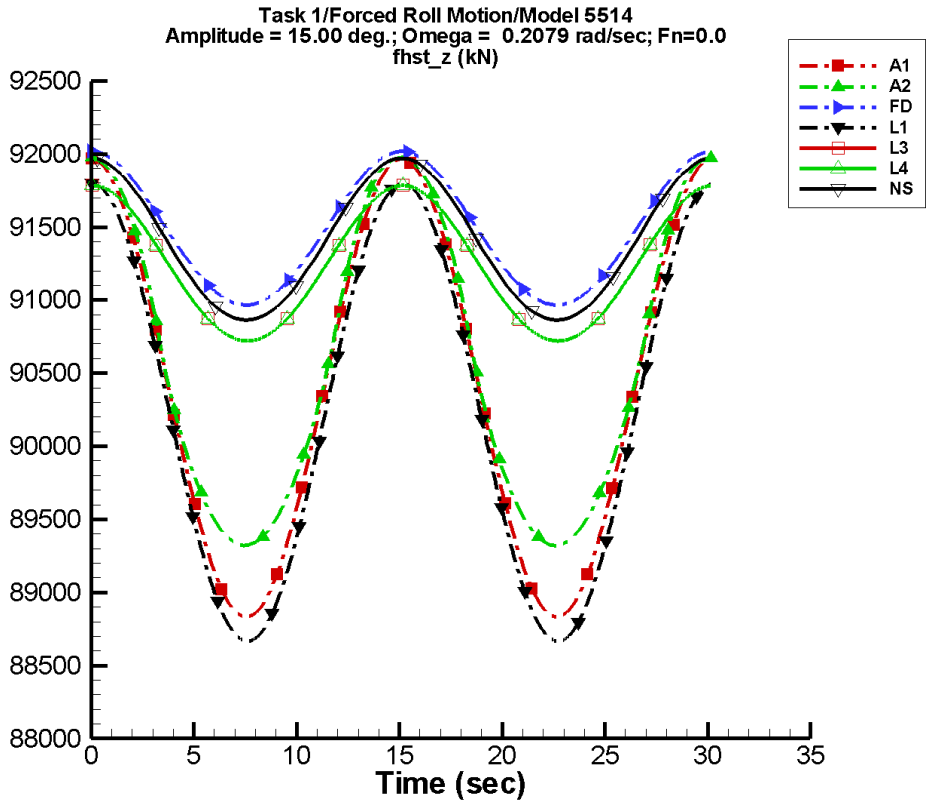
Figure D–271. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–541. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 2.50E-03 | -147 | 175. | 90 |
| A2 | 9.18E+04 | 8.01E-02 | 38 | 135. | 90 |
| FD | 9.20E+04 | 2.84E-02 | -164 | 64.4 | 90 |
| L1 | 9.16E+04 | 6.44E-02 | -3 | 175. | 89 |
| L3 | 9.17E+04 | 4.82E-02 | 135 | 64.8 | 89 |
| L4 | 9.17E+04 | 4.82E-02 | 135 | 64.8 | 89 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 1.12E-02 | 152 | 68.3 | 90 |

Table D–542. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

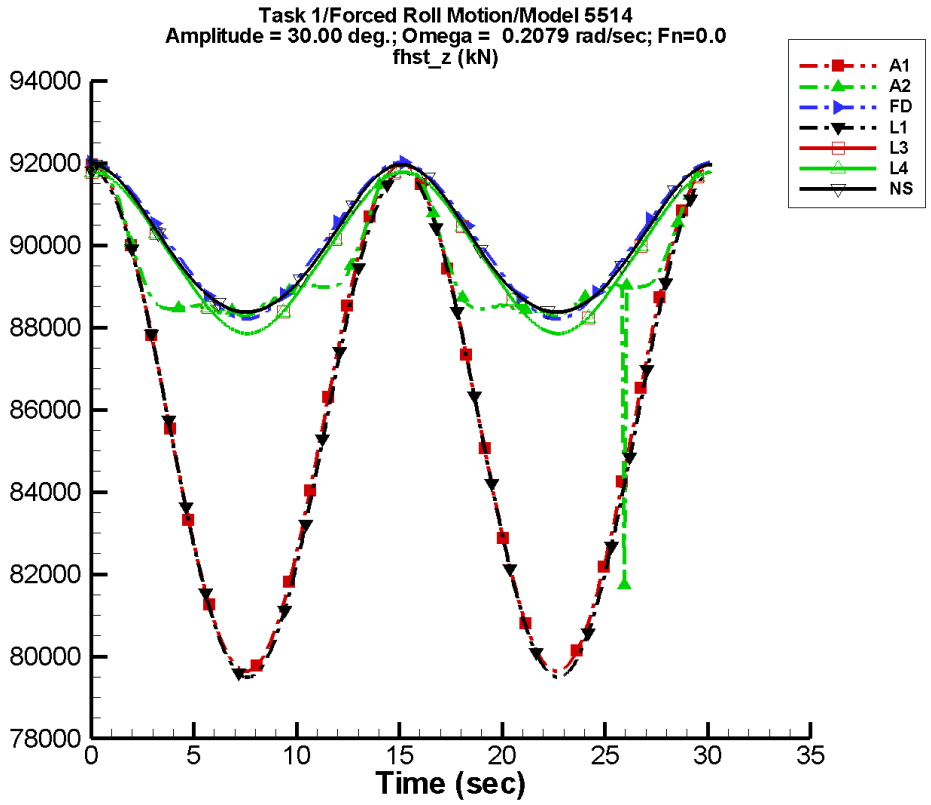
Figure D–272. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–543. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 1.22E-02 | -113 | 1.57E+03 | 90 |
| A2 | 9.06E+04 | 1.66 | -159 | 1.37E+03 | 91 |
| FD | 9.15E+04 | 0.293 | -168 | 524. | 90 |
| L1 | 9.02E+04 | 0.137 | 100 | 1.56E+03 | 89 |
| L3 | 9.12E+04 | 0.826 | 117 | 530. | 89 |
| L4 | 9.12E+04 | 0.826 | 117 | 530. | 89 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 4.69E-03 | 50 | 553. | 90 |

Table D–544. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.88E+04 | 9.20E+04 | 8.88E+04 | 9.20E+04 |
| A2 | 8.93E+04 | 9.20E+04 | 8.93E+04 | 9.20E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.09E+04 | 9.20E+04 | 9.09E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

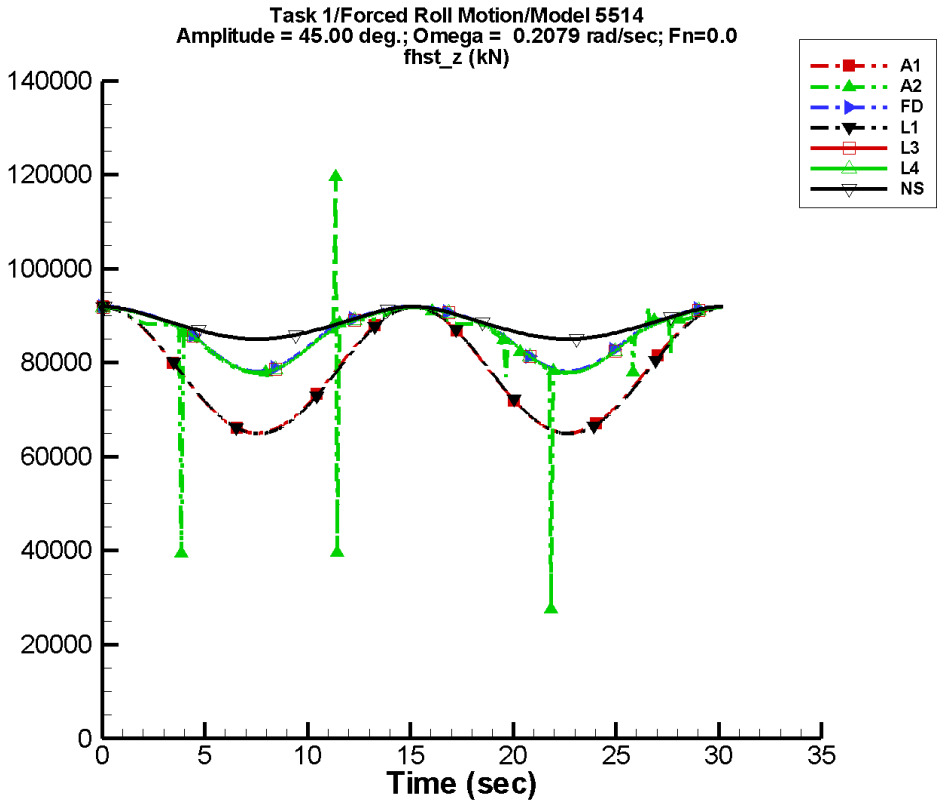
Figure D–273. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–545. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 0.475 | -162 | 6.16E+03 | 90 |
| A2 | 8.94E+04 | 33.8 | -50 | 1.52E+03 | 98 |
| FD | 9.01E+04 | 0.318 | 91 | 1.86E+03 | 90 |
| L1 | 8.56E+04 | 2.57 | 119 | 6.15E+03 | 89 |
| L3 | 8.98E+04 | 2.38 | 112 | 1.92E+03 | 89 |
| L4 | 8.98E+04 | 2.38 | 112 | 1.92E+03 | 89 |
| NF | — | — | — | — | — |
| NS | 9.00E+04 | 1.26E-02 | 153 | 1.78E+03 | 90 |

Table D–546. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.96E+04 | 9.20E+04 | 7.97E+04 | 9.20E+04 |
| A2 | 8.17E+04 | 9.20E+04 | 8.80E+04 | 9.20E+04 |
| FD | 8.82E+04 | 9.20E+04 | 8.82E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.18E+04 | 7.95E+04 | 9.18E+04 |
| L3 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| L4 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.84E+04 | 9.20E+04 | 8.84E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

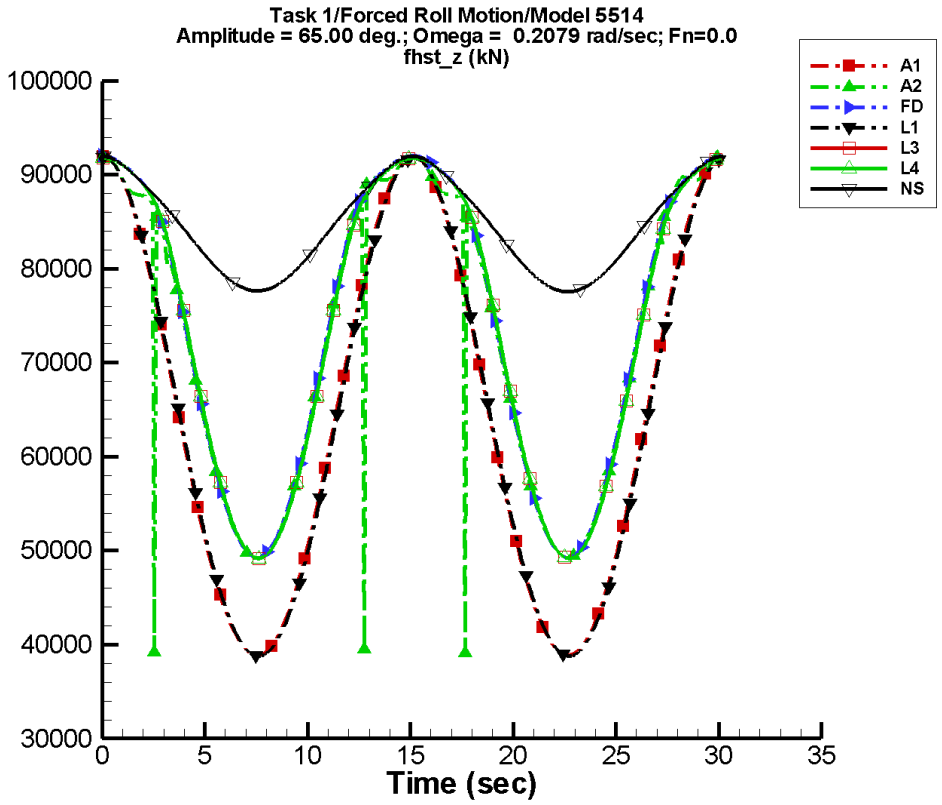
Figure D–274. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–547. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.83E+04 | 2.36 | -161 | 1.35E+04 | 90 |
| A2 | 8.53E+04 | 269. | 0 | 6.68E+03 | 94 |
| FD | 8.62E+04 | 29.8 | 11 | 6.65E+03 | 89 |
| L1 | 7.82E+04 | 12.9 | 120 | 1.34E+04 | 89 |
| L3 | 8.60E+04 | 77.7 | -59 | 6.77E+03 | 89 |
| L4 | 8.60E+04 | 77.7 | -59 | 6.77E+03 | 89 |
| NF | — | — | — | — | — |
| NS | 8.83E+04 | 3.81E-02 | -32 | 3.36E+03 | 90 |

Table D–548. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.50E+04 | 9.20E+04 | 6.51E+04 | 9.20E+04 |
| A2 | 2.76E+04 | 1.20E+05 | 7.17E+04 | 9.20E+04 |
| FD | 7.82E+04 | 9.20E+04 | 7.82E+04 | 9.20E+04 |
| L1 | 6.49E+04 | 9.18E+04 | 6.49E+04 | 9.18E+04 |
| L3 | 7.79E+04 | 9.18E+04 | 7.79E+04 | 9.18E+04 |
| L4 | 7.79E+04 | 9.18E+04 | 7.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.50E+04 | 9.20E+04 | 8.51E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

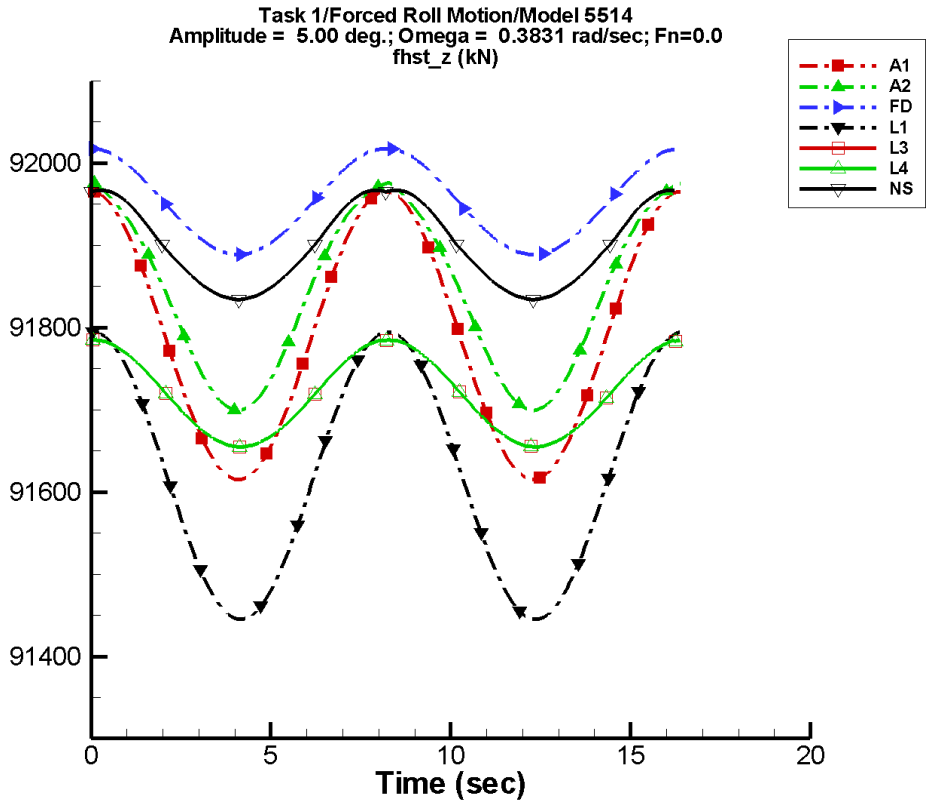
Figure D–275. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–549. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.47E+04 | 9.91 | -161 | 2.65E+04 | 90 |
| A2 | 7.29E+04 | 391. | 95 | 2.11E+04 | 91 |
| FD | 7.37E+04 | 68.3 | 3 | 2.19E+04 | 89 |
| L1 | 6.45E+04 | 54.2 | 119 | 2.64E+04 | 89 |
| L3 | 7.36E+04 | 271. | -61 | 2.21E+04 | 89 |
| L4 | 7.36E+04 | 271. | -61 | 2.21E+04 | 89 |
| NF | — | — | — | — | — |
| NS | 8.47E+04 | 36.9 | 0 | 6.94E+03 | 90 |

Table D–550. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.89E+04 | 9.20E+04 | 3.90E+04 | 9.20E+04 |
| A2 | 3.91E+04 | 9.20E+04 | 4.94E+04 | 9.19E+04 |
| FD | 4.93E+04 | 9.20E+04 | 4.94E+04 | 9.21E+04 |
| L1 | 3.88E+04 | 9.18E+04 | 3.88E+04 | 9.18E+04 |
| L3 | 4.92E+04 | 9.18E+04 | 4.92E+04 | 9.18E+04 |
| L4 | 4.92E+04 | 9.18E+04 | 4.92E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 7.75E+04 | 9.20E+04 | 7.76E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

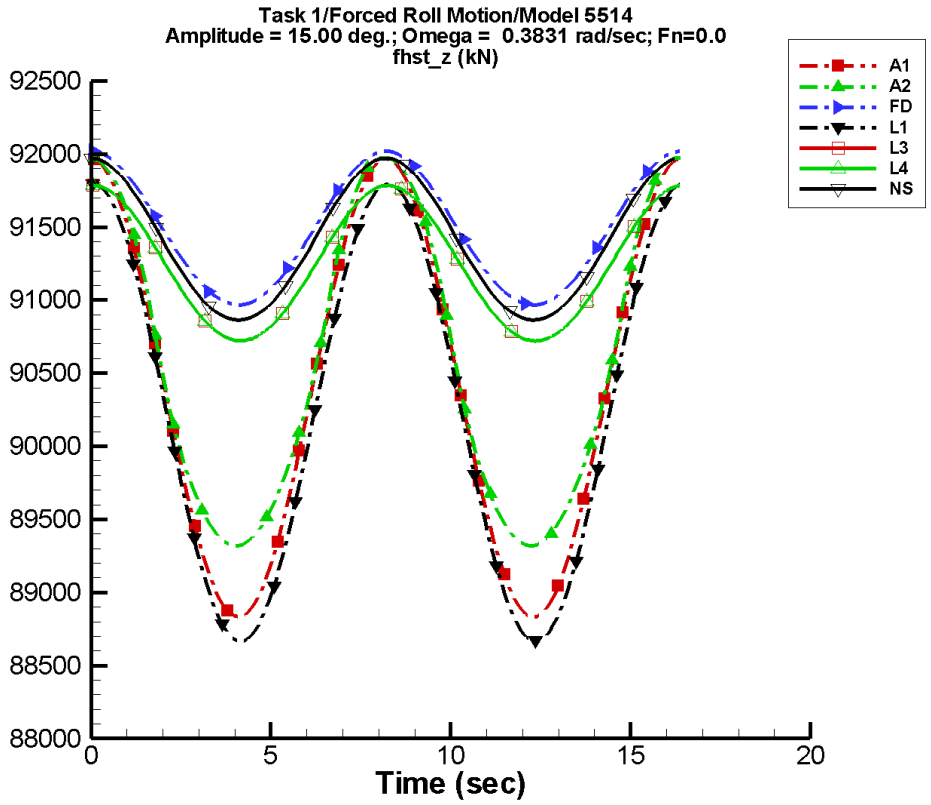
Figure D–276. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–551. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 1.16E-02 | 168 | 175. | 90 |
| A2 | 9.18E+04 | 6.19E-02 | 26 | 135. | 91 |
| FD | 9.20E+04 | 3.60E-02 | 106 | 64.3 | 90 |
| L1 | 9.16E+04 | 1.65E-02 | 20 | 175. | 87 |
| L3 | 9.17E+04 | 3.75E-02 | 161 | 64.9 | 87 |
| L4 | 9.17E+04 | 3.75E-02 | 161 | 64.9 | 87 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 1.06E-02 | 52 | 68.3 | 90 |

Table D–552. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

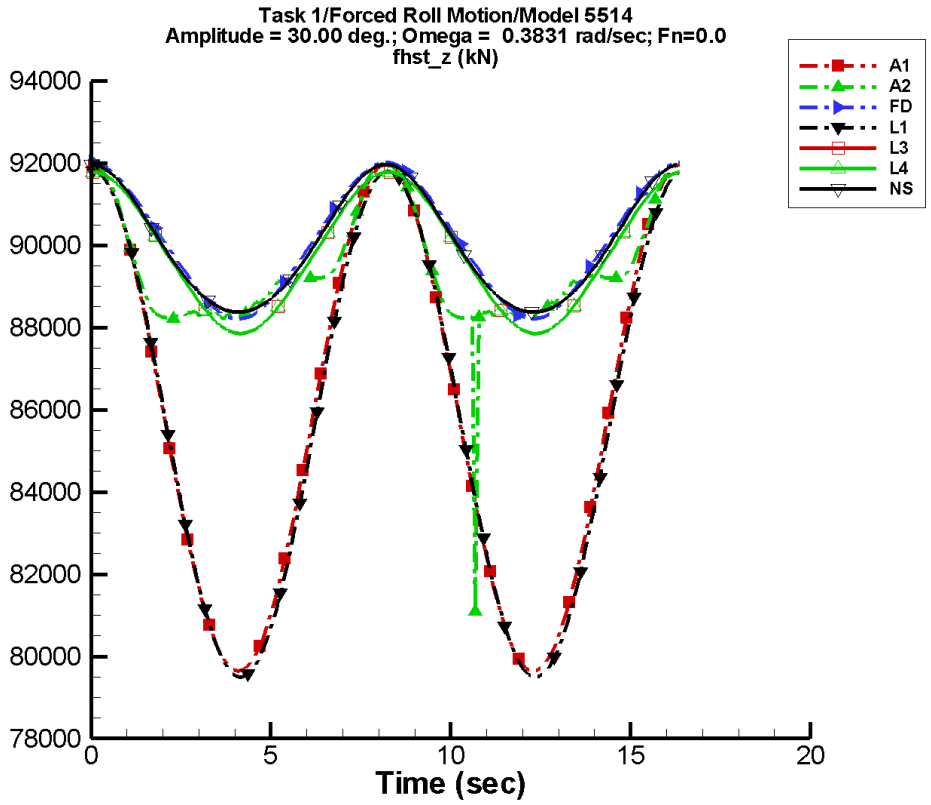
Figure D–277. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–553. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 2.04E-02 | -99 | 1.57E+03 | 90 |
| A2 | 9.06E+04 | 0.955 | -129 | 1.37E+03 | 91 |
| FD | 9.15E+04 | 0.588 | 120 | 523. | 90 |
| L1 | 9.02E+04 | 0.145 | 169 | 1.56E+03 | 87 |
| L3 | 9.12E+04 | 0.554 | 162 | 531. | 87 |
| L4 | 9.12E+04 | 0.554 | 162 | 531. | 87 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 1.33E-02 | 52 | 553. | 90 |

Table D–554. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.88E+04 | 9.20E+04 | 8.88E+04 | 9.20E+04 |
| A2 | 8.93E+04 | 9.20E+04 | 8.93E+04 | 9.20E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.09E+04 | 9.20E+04 | 9.09E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

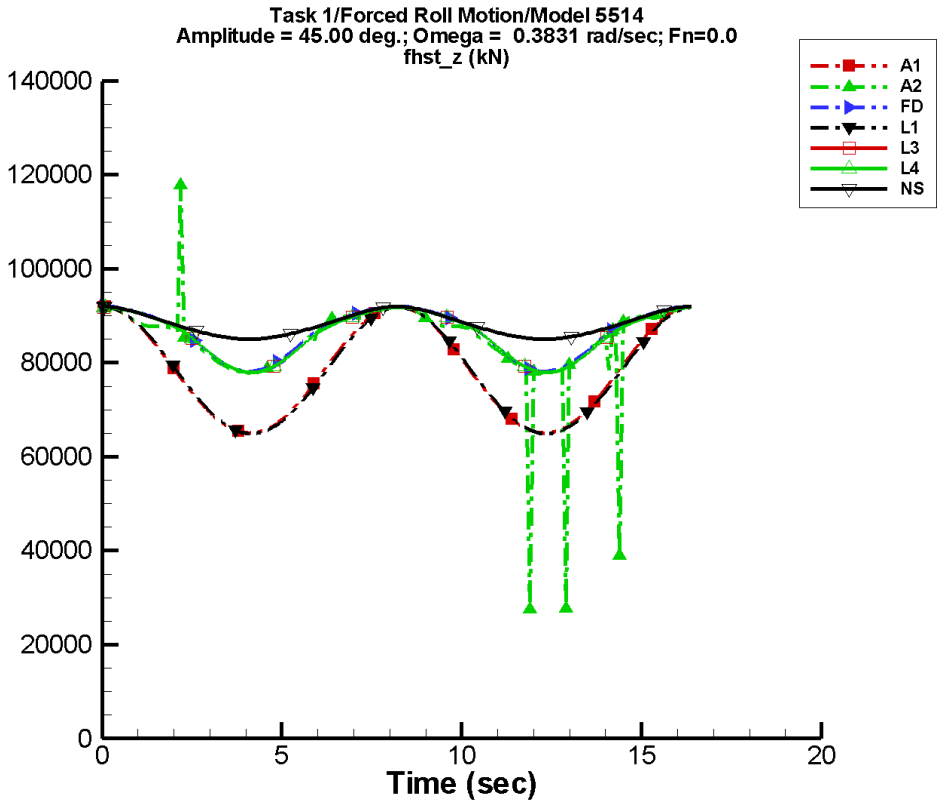
Figure D–278. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–555. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 0.324 | -96 | 6.16E+03 | 90 |
| A2 | 8.94E+04 | 88.9 | 41 | 1.61E+03 | 109 |
| FD | 9.01E+04 | 0.322 | -40 | 1.86E+03 | 90 |
| L1 | 8.56E+04 | 1.75 | 165 | 6.15E+03 | 87 |
| L3 | 8.98E+04 | 2.50 | -164 | 1.92E+03 | 87 |
| L4 | 8.98E+04 | 2.50 | -164 | 1.92E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 9.00E+04 | 6.33E-03 | -152 | 1.78E+03 | 90 |

Table D–556. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.96E+04 | 9.20E+04 | 7.96E+04 | 9.19E+04 |
| A2 | 8.11E+04 | 9.20E+04 | 8.73E+04 | 9.19E+04 |
| FD | 8.82E+04 | 9.20E+04 | 8.82E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.18E+04 | 7.95E+04 | 9.18E+04 |
| L3 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| L4 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.84E+04 | 9.20E+04 | 8.84E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

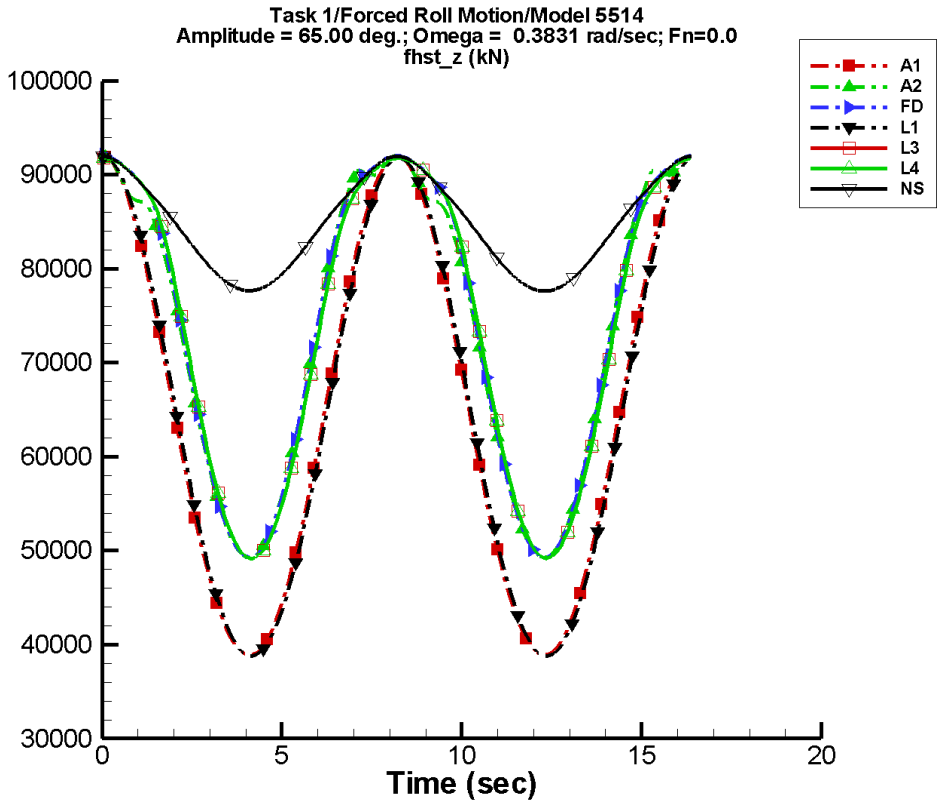
Figure D–279. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–557. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.83E+04 | 1.56 | -97 | 1.35E+04 | 90 |
| A2 | 8.47E+04 | 1.87E+03 | -14 | 7.49E+03 | 87 |
| FD | 8.63E+04 | 70.1 | -59 | 6.75E+03 | 90 |
| L1 | 7.82E+04 | 7.89 | 162 | 1.35E+04 | 87 |
| L3 | 8.60E+04 | 45.0 | -27 | 6.63E+03 | 87 |
| L4 | 8.60E+04 | 45.0 | -27 | 6.63E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 8.83E+04 | 4.71E-02 | 172 | 3.36E+03 | 90 |

Table D–558. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.50E+04 | 9.20E+04 | 6.50E+04 | 9.19E+04 |
| A2 | 2.76E+04 | 1.18E+05 | 7.22E+04 | 9.19E+04 |
| FD | 7.82E+04 | 9.20E+04 | 7.83E+04 | 9.20E+04 |
| L1 | 6.49E+04 | 9.18E+04 | 6.50E+04 | 9.18E+04 |
| L3 | 7.79E+04 | 9.18E+04 | 7.80E+04 | 9.18E+04 |
| L4 | 7.79E+04 | 9.18E+04 | 7.80E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.50E+04 | 9.20E+04 | 8.51E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

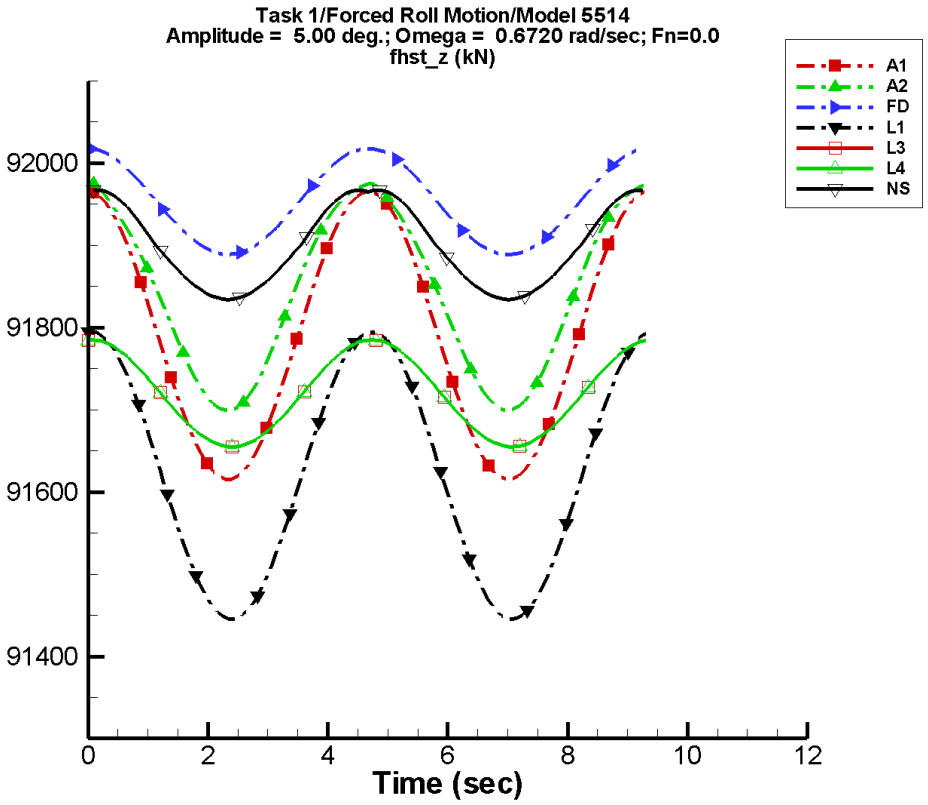
Figure D–280. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–559. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.47E+04 | 6.54 | -97 | 2.65E+04 | 90 |
| A2 | 7.33E+04 | 20.9 | -10 | 2.15E+04 | 91 |
| FD | 7.38E+04 | 138. | -61 | 2.21E+04 | 90 |
| L1 | 6.45E+04 | 33.0 | 162 | 2.65E+04 | 87 |
| L3 | 7.35E+04 | 171. | -9 | 2.17E+04 | 87 |
| L4 | 7.35E+04 | 171. | -9 | 2.17E+04 | 87 |
| NF | — | — | — | — | — |
| NS | 8.47E+04 | 24.3 | -2 | 6.92E+03 | 90 |

Table D–560. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.89E+04 | 9.20E+04 | 3.88E+04 | 9.18E+04 |
| A2 | 4.92E+04 | 9.20E+04 | 4.92E+04 | 9.17E+04 |
| FD | 4.93E+04 | 9.20E+04 | 4.97E+04 | 9.19E+04 |
| L1 | 3.88E+04 | 9.18E+04 | 3.89E+04 | 9.18E+04 |
| L3 | 4.92E+04 | 9.18E+04 | 4.93E+04 | 9.18E+04 |
| L4 | 4.92E+04 | 9.18E+04 | 4.93E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 7.76E+04 | 9.20E+04 | 7.76E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

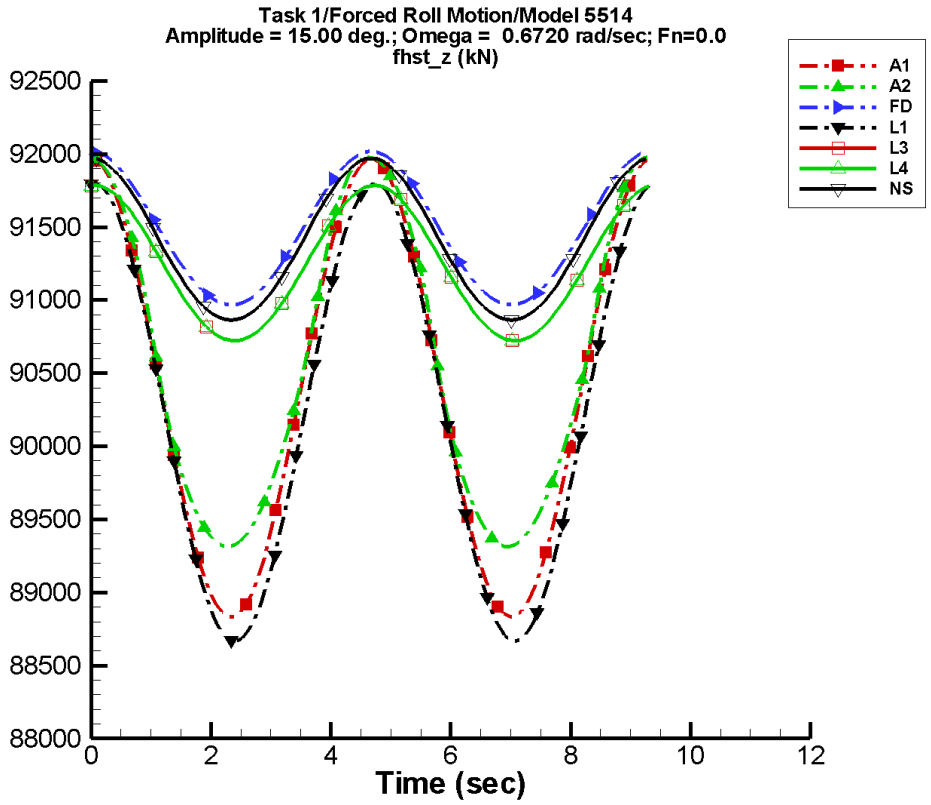
Figure D–281. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–561. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 2.62E-02 | -43 | 175. | 90 |
| A2 | 9.18E+04 | 0.486 | 0 | 135. | 92 |
| FD | 9.20E+04 | 5.69E-02 | 154 | 64.4 | 90 |
| L1 | 9.16E+04 | 9.82E-03 | 177 | 175. | 85 |
| L3 | 9.17E+04 | 3.95E-02 | 174 | 64.9 | 85 |
| L4 | 9.17E+04 | 3.95E-02 | 174 | 64.9 | 85 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 4.61E-03 | -54 | 68.3 | 90 |

Table D–562. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

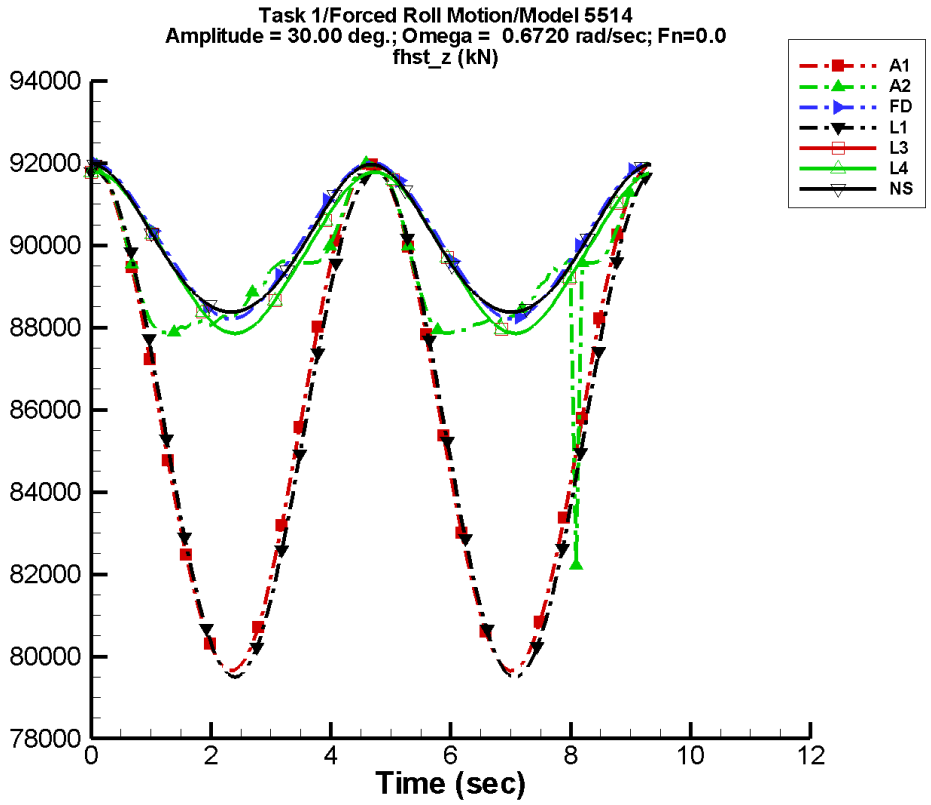
Figure D–282. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–563. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 0.149 | -166 | 1.57E+03 | 90 |
| A2 | 9.06E+04 | 7.93 | -176 | 1.38E+03 | 91 |
| FD | 9.15E+04 | 0.851 | 150 | 523. | 90 |
| L1 | 9.02E+04 | 0.266 | 175 | 1.56E+03 | 85 |
| L3 | 9.12E+04 | 0.825 | 179 | 531. | 85 |
| L4 | 9.12E+04 | 0.825 | 179 | 531. | 85 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 2.34E-02 | -29 | 553. | 90 |

Table D–564. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.88E+04 | 9.20E+04 | 8.89E+04 | 9.19E+04 |
| A2 | 8.93E+04 | 9.20E+04 | 8.94E+04 | 9.19E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.09E+04 | 9.20E+04 | 9.09E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

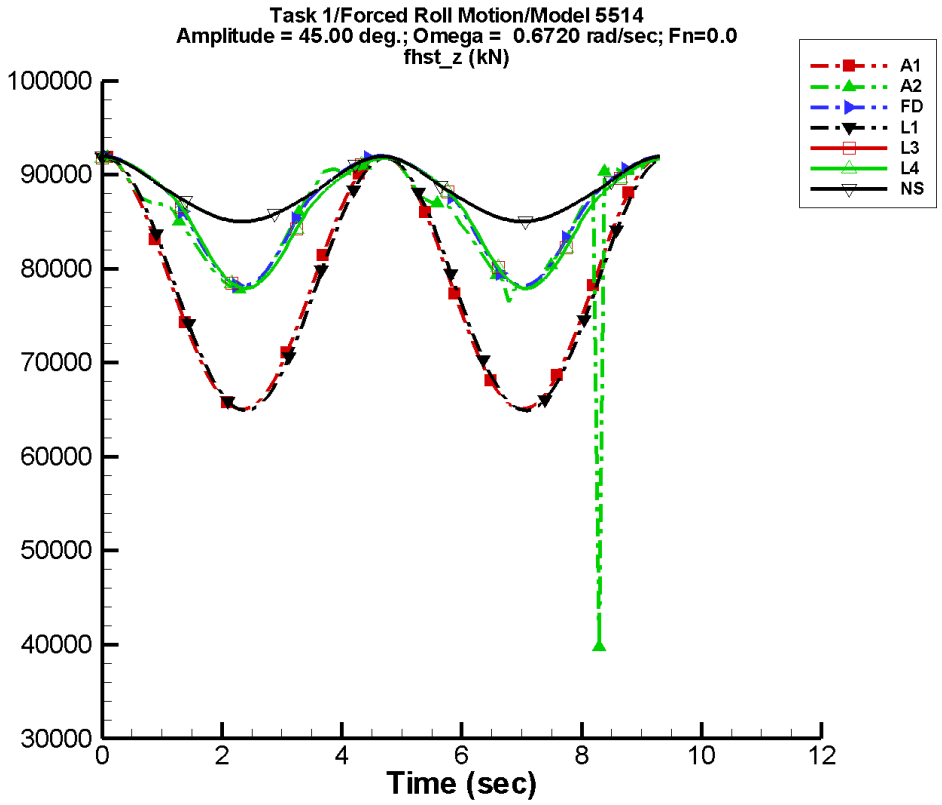
Figure D–283. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–565. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 2.23 | -170 | 6.16E+03 | 90 |
| A2 | 8.94E+04 | 120. | -52 | 1.70E+03 | 110 |
| FD | 9.01E+04 | 0.295 | -14 | 1.86E+03 | 90 |
| L1 | 8.56E+04 | 2.90 | 179 | 6.15E+03 | 85 |
| L3 | 8.98E+04 | 0.863 | 175 | 1.92E+03 | 85 |
| L4 | 8.98E+04 | 0.863 | 175 | 1.92E+03 | 85 |
| NF | — | — | — | — | — |
| NS | 9.00E+04 | 1.65E-02 | 80 | 1.78E+03 | 90 |

Table D–566. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.96E+04 | 9.20E+04 | 7.99E+04 | 9.18E+04 |
| A2 | 8.22E+04 | 9.20E+04 | 8.79E+04 | 9.17E+04 |
| FD | 8.82E+04 | 9.20E+04 | 8.83E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.18E+04 | 7.96E+04 | 9.18E+04 |
| L3 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| L4 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.84E+04 | 9.20E+04 | 8.84E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

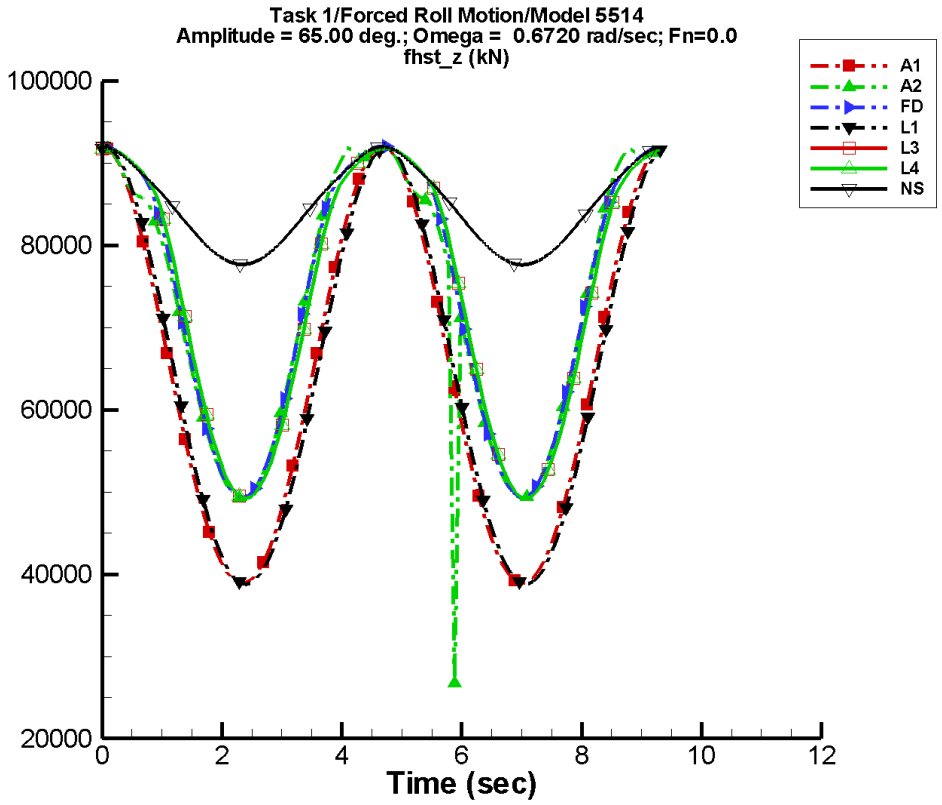
Figure D–284. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–567. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.83E+04 | 11.1 | -170 | 1.35E+04 | 90 |
| A2 | 8.51E+04 | 1.07E+03 | -44 | 6.36E+03 | 91 |
| FD | 8.62E+04 | 96.0 | -29 | 6.72E+03 | 89 |
| L1 | 7.82E+04 | 13.1 | 179 | 1.35E+04 | 85 |
| L3 | 8.60E+04 | 86.3 | 1 | 6.60E+03 | 84 |
| L4 | 8.60E+04 | 86.3 | 1 | 6.60E+03 | 84 |
| NF | — | — | — | — | — |
| NS | 8.83E+04 | 1.99E-02 | 16 | 3.36E+03 | 90 |

Table D–568. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.50E+04 | 9.20E+04 | 6.56E+04 | 9.15E+04 |
| A2 | 3.97E+04 | 9.20E+04 | 7.80E+04 | 9.19E+04 |
| FD | 7.82E+04 | 9.20E+04 | 7.86E+04 | 9.19E+04 |
| L1 | 6.49E+04 | 9.18E+04 | 6.51E+04 | 9.18E+04 |
| L3 | 7.79E+04 | 9.18E+04 | 7.81E+04 | 9.18E+04 |
| L4 | 7.79E+04 | 9.18E+04 | 7.81E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.50E+04 | 9.20E+04 | 8.51E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

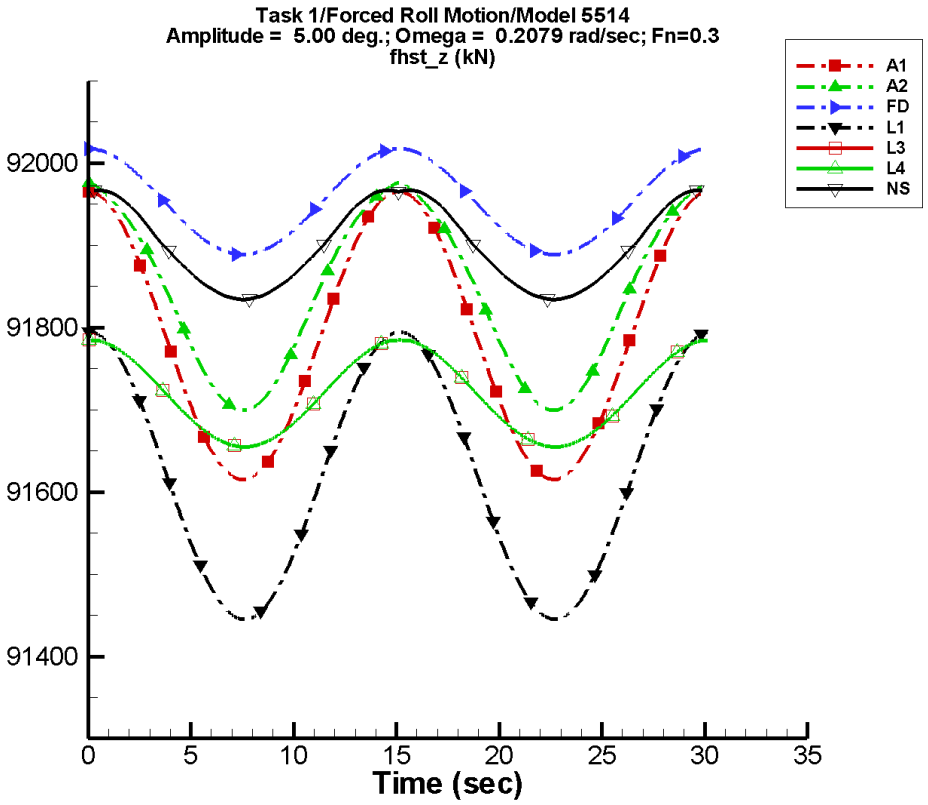
Figure D–285. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–569. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.47E+04 | 46.8 | -171 | 2.66E+04 | 90 |
| A2 | 7.29E+04 | 1.22E+03 | 36 | 2.15E+04 | 95 |
| FD | 7.37E+04 | 210. | -30 | 2.20E+04 | 89 |
| L1 | 6.45E+04 | 53.3 | 179 | 2.65E+04 | 86 |
| L3 | 7.36E+04 | 226. | 0 | 2.16E+04 | 85 |
| L4 | 7.36E+04 | 226. | 0 | 2.16E+04 | 85 |
| NF | — | — | — | — | — |
| NS | 8.47E+04 | 23.5 | 0 | 6.92E+03 | 90 |

Table D–570. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.89E+04 | 9.20E+04 | 4.00E+04 | 9.11E+04 |
| A2 | 2.67E+04 | 9.20E+04 | 5.05E+04 | 9.15E+04 |
| FD | 4.93E+04 | 9.20E+04 | 5.03E+04 | 9.19E+04 |
| L1 | 3.88E+04 | 9.18E+04 | 3.92E+04 | 9.18E+04 |
| L3 | 4.92E+04 | 9.18E+04 | 4.97E+04 | 9.18E+04 |
| L4 | 4.92E+04 | 9.18E+04 | 4.97E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 7.76E+04 | 9.20E+04 | 7.76E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

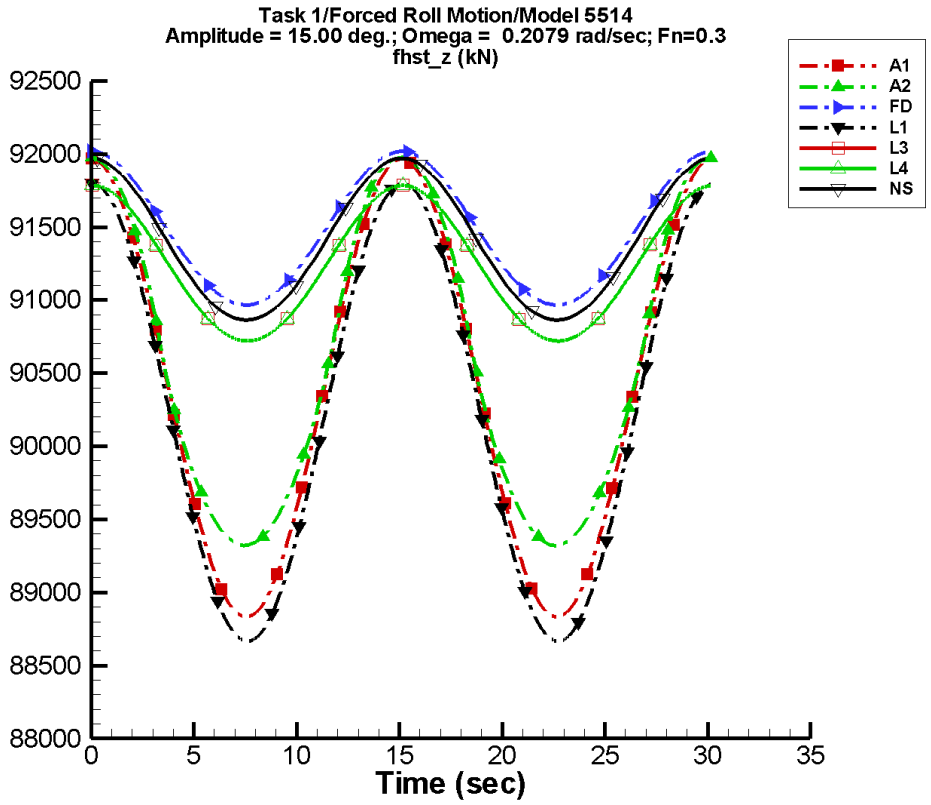
Figure D–286. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–571. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 2.50E-03 | -147 | 175. | 90 |
| A2 | 9.18E+04 | 0.122 | 16 | 135. | 91 |
| FD | 9.20E+04 | 2.51E-02 | -167 | 64.4 | 90 |
| L1 | 9.16E+04 | 6.44E-02 | -3 | 175. | 89 |
| L3 | 9.17E+04 | 4.37E-02 | 134 | 64.8 | 89 |
| L4 | 9.17E+04 | 4.37E-02 | 134 | 64.8 | 89 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 1.12E-02 | 152 | 68.3 | 90 |

Table D–572. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

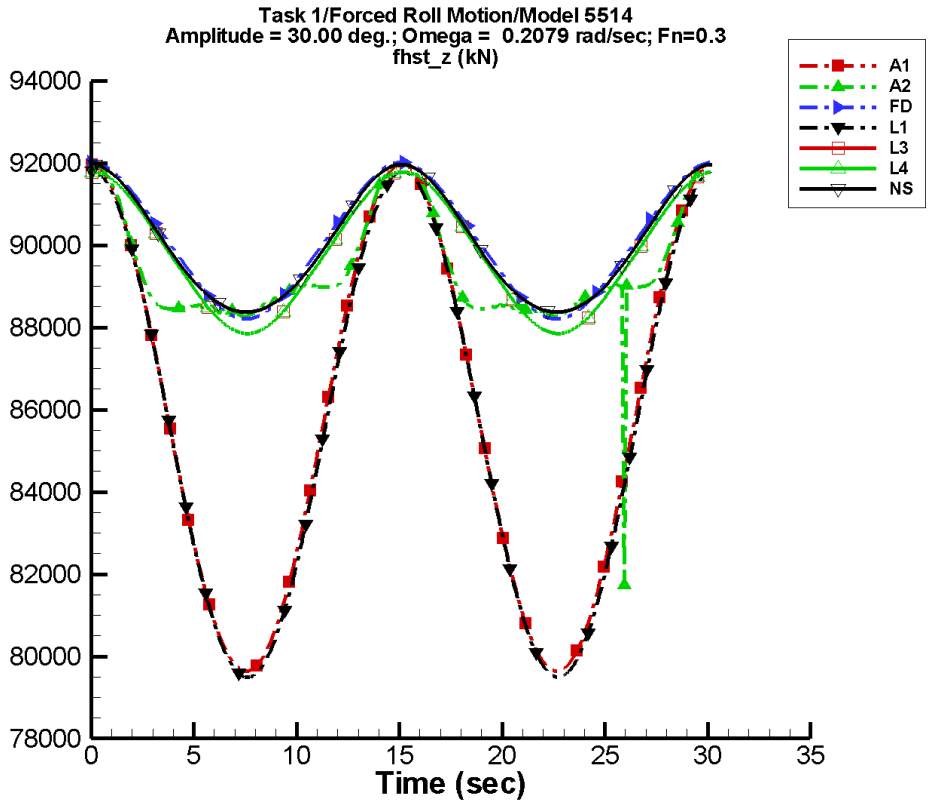
Figure D–287. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–573. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 1.22E-02 | -113 | 1.57E+03 | 90 |
| A2 | 9.06E+04 | 1.66 | -159 | 1.37E+03 | 91 |
| FD | 9.15E+04 | 0.298 | -168 | 524. | 90 |
| L1 | 9.02E+04 | 0.137 | 100 | 1.56E+03 | 89 |
| L3 | 9.12E+04 | 0.831 | 118 | 530. | 89 |
| L4 | 9.12E+04 | 0.831 | 118 | 530. | 89 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 4.69E-03 | 50 | 553. | 90 |

Table D–574. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.88E+04 | 9.20E+04 | 8.88E+04 | 9.20E+04 |
| A2 | 8.93E+04 | 9.20E+04 | 8.93E+04 | 9.20E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.09E+04 | 9.20E+04 | 9.09E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

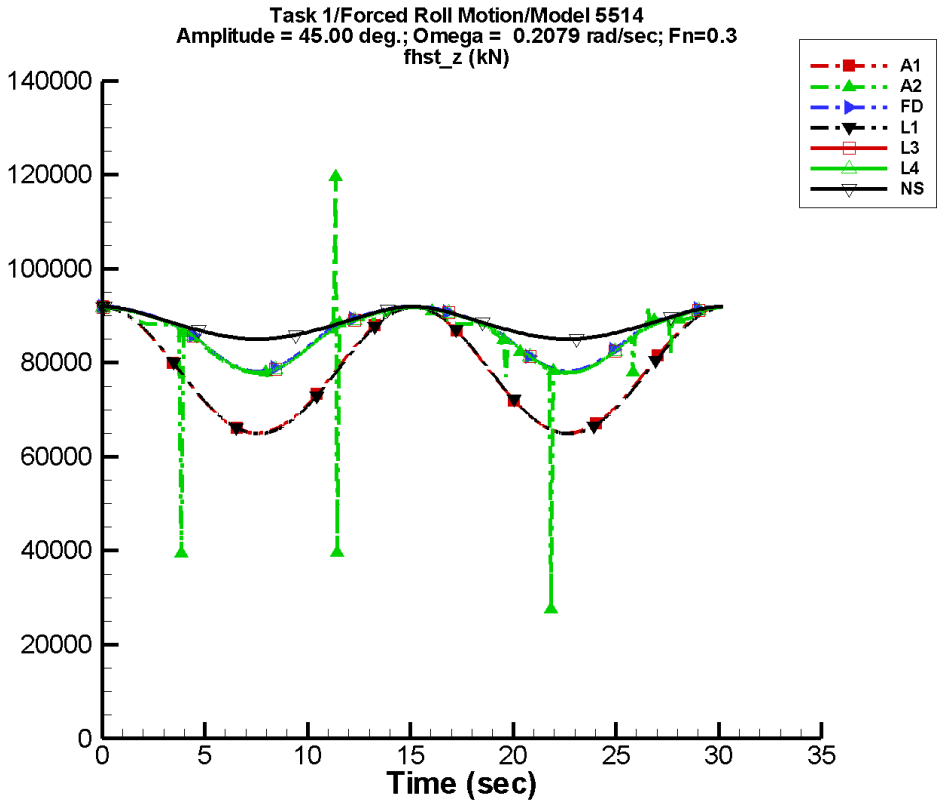
Figure D–288. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–575. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 0.475 | -162 | 6.16E+03 | 90 |
| A2 | 8.94E+04 | 33.8 | -50 | 1.52E+03 | 98 |
| FD | 9.01E+04 | 0.318 | 91 | 1.86E+03 | 90 |
| L1 | 8.56E+04 | 2.57 | 119 | 6.15E+03 | 89 |
| L3 | 8.98E+04 | 2.36 | 112 | 1.92E+03 | 89 |
| L4 | 8.98E+04 | 2.36 | 112 | 1.92E+03 | 89 |
| NF | — | — | — | — | — |
| NS | 9.00E+04 | 1.26E-02 | 153 | 1.78E+03 | 90 |

Table D–576. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.96E+04 | 9.20E+04 | 7.97E+04 | 9.20E+04 |
| A2 | 8.17E+04 | 9.20E+04 | 8.80E+04 | 9.20E+04 |
| FD | 8.82E+04 | 9.20E+04 | 8.82E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.18E+04 | 7.95E+04 | 9.18E+04 |
| L3 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| L4 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.84E+04 | 9.20E+04 | 8.84E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

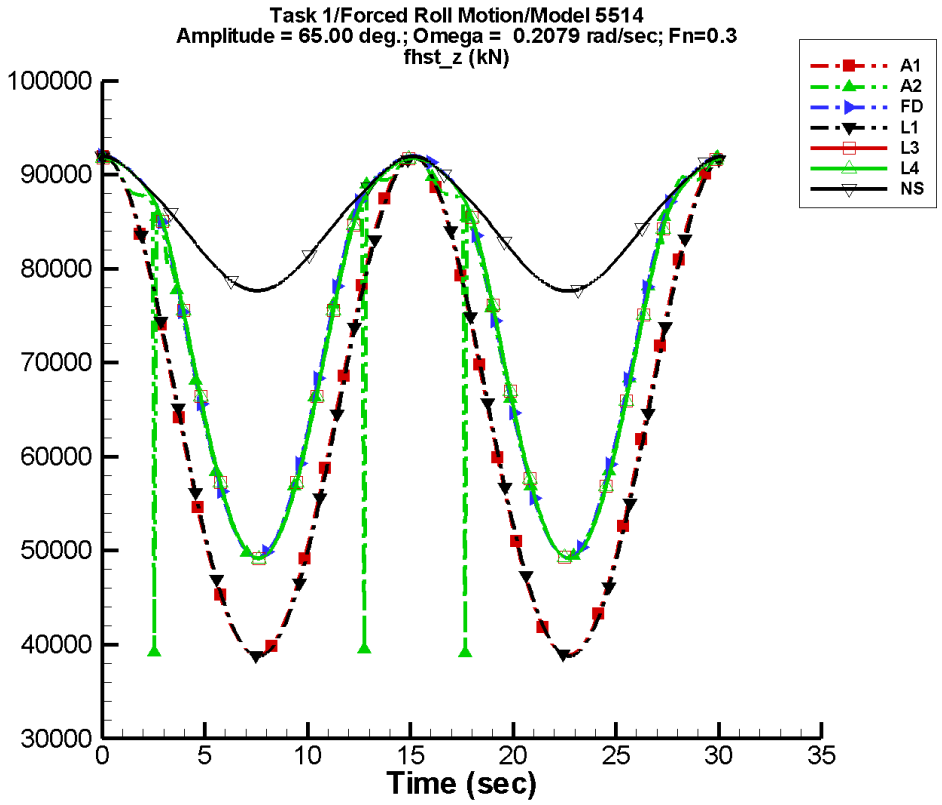
Figure D–289. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–577. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.83E+04 | 2.36 | -161 | 1.35E+04 | 90 |
| A2 | 8.53E+04 | 269. | 0 | 6.68E+03 | 94 |
| FD | 8.62E+04 | 29.8 | 11 | 6.65E+03 | 89 |
| L1 | 7.82E+04 | 12.9 | 120 | 1.34E+04 | 89 |
| L3 | 8.60E+04 | 77.7 | -59 | 6.77E+03 | 89 |
| L4 | 8.60E+04 | 77.7 | -59 | 6.77E+03 | 89 |
| NF | — | — | — | — | — |
| NS | 8.83E+04 | 3.81E-02 | -32 | 3.36E+03 | 90 |

Table D–578. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.50E+04 | 9.20E+04 | 6.51E+04 | 9.20E+04 |
| A2 | 2.76E+04 | 1.20E+05 | 7.17E+04 | 9.20E+04 |
| FD | 7.82E+04 | 9.20E+04 | 7.82E+04 | 9.20E+04 |
| L1 | 6.49E+04 | 9.18E+04 | 6.49E+04 | 9.18E+04 |
| L3 | 7.79E+04 | 9.18E+04 | 7.79E+04 | 9.18E+04 |
| L4 | 7.79E+04 | 9.18E+04 | 7.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.50E+04 | 9.20E+04 | 8.51E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

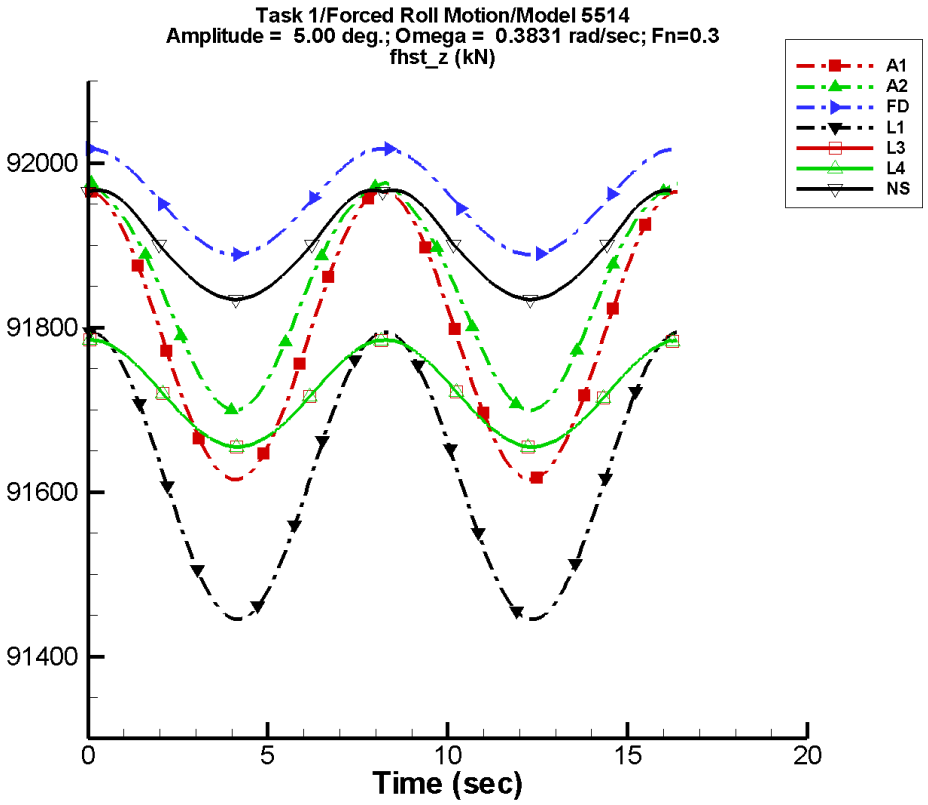
Figure D–290. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–579. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.47E+04 | 9.91 | -161 | 2.65E+04 | 90 |
| A2 | 7.29E+04 | 391. | 95 | 2.11E+04 | 91 |
| FD | 7.37E+04 | 68.3 | 3 | 2.19E+04 | 89 |
| L1 | 6.45E+04 | 54.2 | 119 | 2.64E+04 | 89 |
| L3 | 7.36E+04 | 271. | -61 | 2.21E+04 | 89 |
| L4 | 7.36E+04 | 271. | -61 | 2.21E+04 | 89 |
| NF | — | — | — | — | — |
| NS | 8.47E+04 | 24.0 | -2 | 6.92E+03 | 90 |

Table D–580. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.89E+04 | 9.20E+04 | 3.90E+04 | 9.20E+04 |
| A2 | 3.91E+04 | 9.20E+04 | 4.94E+04 | 9.19E+04 |
| FD | 4.93E+04 | 9.20E+04 | 4.94E+04 | 9.21E+04 |
| L1 | 3.88E+04 | 9.18E+04 | 3.88E+04 | 9.18E+04 |
| L3 | 4.92E+04 | 9.18E+04 | 4.92E+04 | 9.18E+04 |
| L4 | 4.92E+04 | 9.18E+04 | 4.92E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 7.76E+04 | 9.20E+04 | 7.76E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

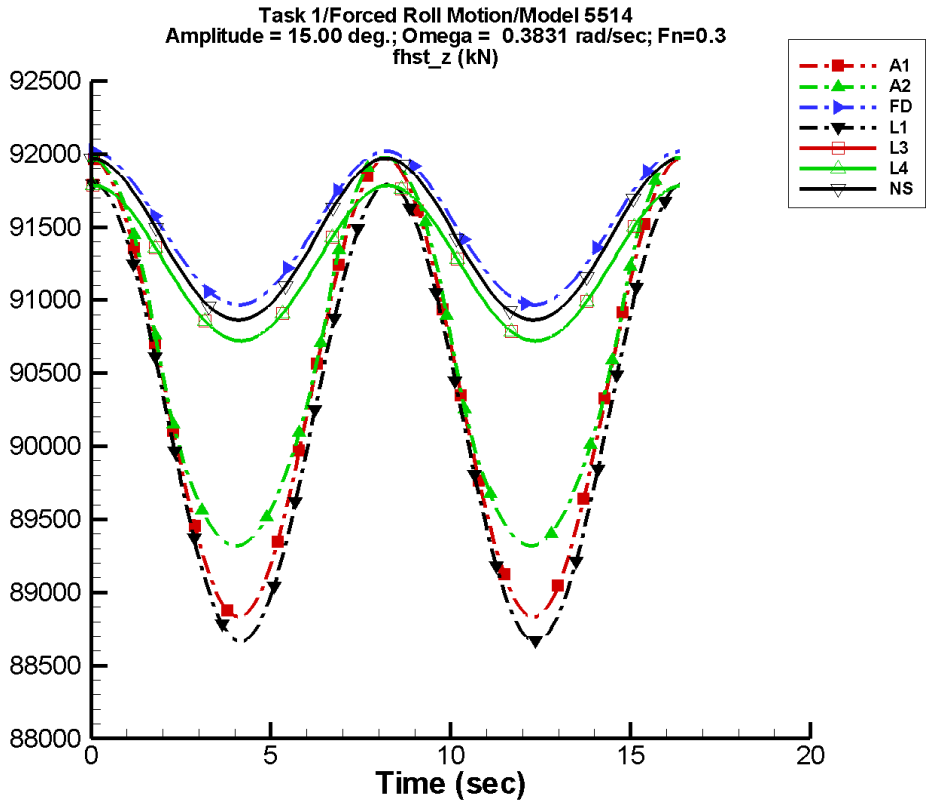
Figure D–291. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–581. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 1.16E-02 | 168 | 175. | 90 |
| A2 | 9.18E+04 | 6.19E-02 | 26 | 135. | 91 |
| FD | 9.20E+04 | 3.25E-02 | 100 | 64.3 | 90 |
| L1 | 9.16E+04 | 1.65E-02 | 20 | 175. | 87 |
| L3 | 9.17E+04 | 3.66E-02 | 169 | 64.9 | 87 |
| L4 | 9.17E+04 | 3.66E-02 | 169 | 64.9 | 87 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 1.06E-02 | 52 | 68.3 | 90 |

Table D–582. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

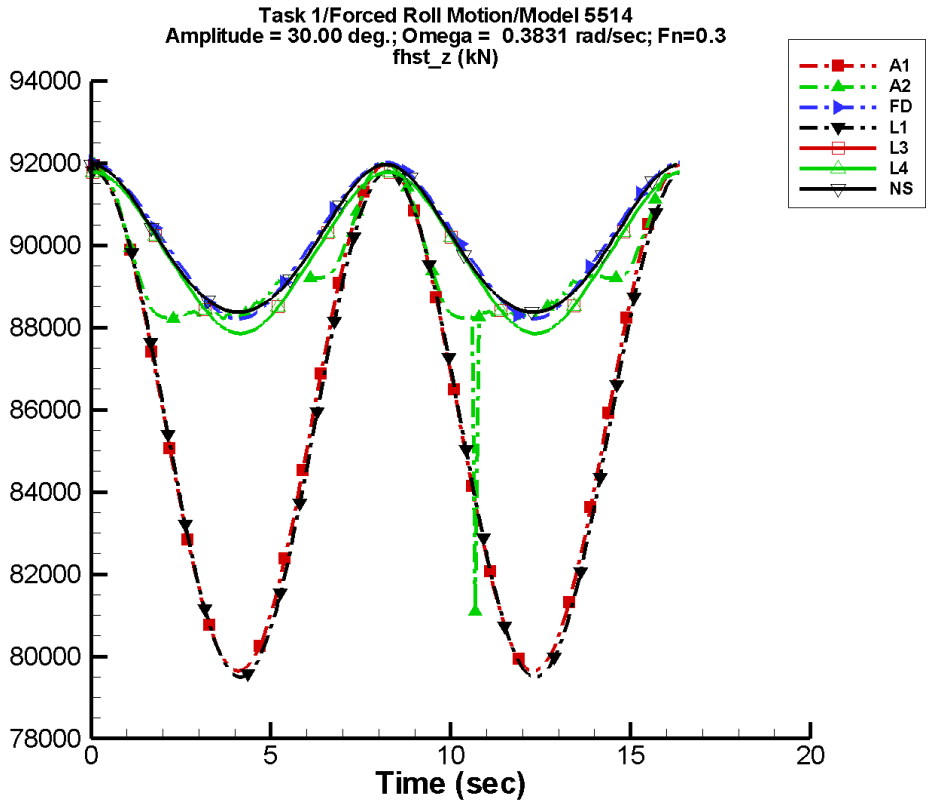
Figure D–292. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–583. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 2.04E-02 | -99 | 1.57E+03 | 90 |
| A2 | 9.06E+04 | 0.955 | -129 | 1.37E+03 | 91 |
| FD | 9.15E+04 | 0.588 | 120 | 523. | 90 |
| L1 | 9.02E+04 | 0.145 | 169 | 1.56E+03 | 87 |
| L3 | 9.12E+04 | 0.565 | 163 | 531. | 87 |
| L4 | 9.12E+04 | 0.565 | 163 | 531. | 87 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 1.33E-02 | 52 | 553. | 90 |

Table D–584. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.88E+04 | 9.20E+04 | 8.88E+04 | 9.20E+04 |
| A2 | 8.93E+04 | 9.20E+04 | 8.93E+04 | 9.20E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.09E+04 | 9.20E+04 | 9.09E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

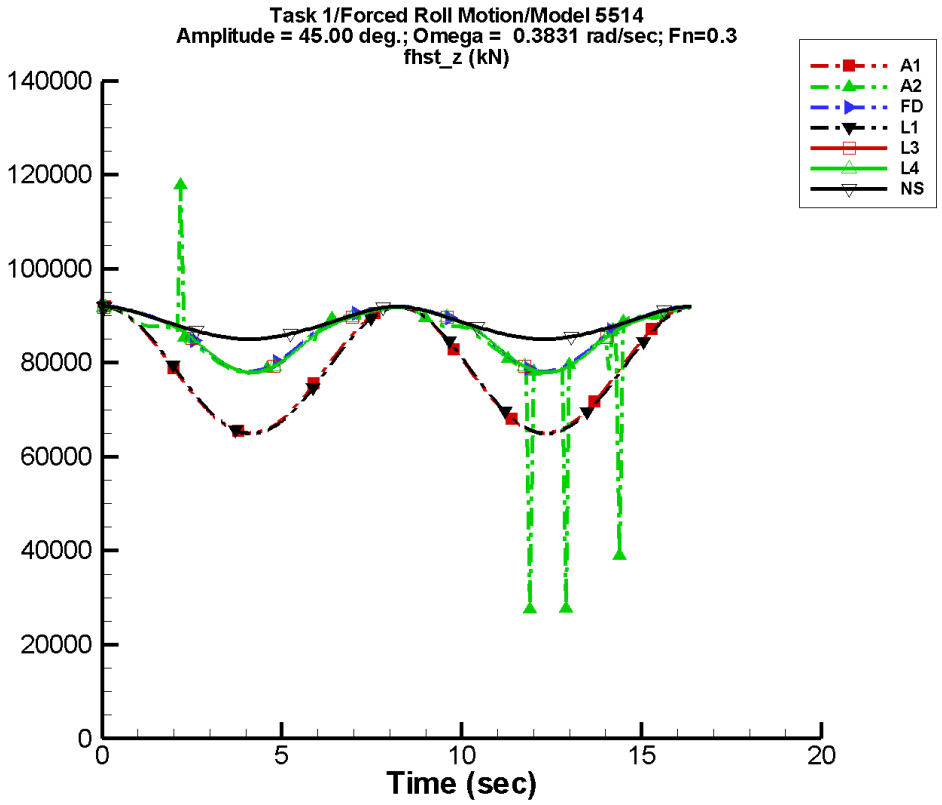
Figure D–293. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–585. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 0.324 | -96 | 6.16E+03 | 90 |
| A2 | 8.94E+04 | 88.9 | 41 | 1.61E+03 | 109 |
| FD | 9.01E+04 | 0.324 | -40 | 1.86E+03 | 90 |
| L1 | 8.56E+04 | 1.75 | 165 | 6.15E+03 | 87 |
| L3 | 8.98E+04 | 2.49 | -164 | 1.92E+03 | 87 |
| L4 | 8.98E+04 | 2.49 | -164 | 1.92E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 9.00E+04 | 6.33E-03 | -152 | 1.78E+03 | 90 |

Table D–586. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.96E+04 | 9.20E+04 | 7.96E+04 | 9.19E+04 |
| A2 | 8.11E+04 | 9.20E+04 | 8.73E+04 | 9.19E+04 |
| FD | 8.82E+04 | 9.20E+04 | 8.82E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.18E+04 | 7.95E+04 | 9.18E+04 |
| L3 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| L4 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.84E+04 | 9.20E+04 | 8.84E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

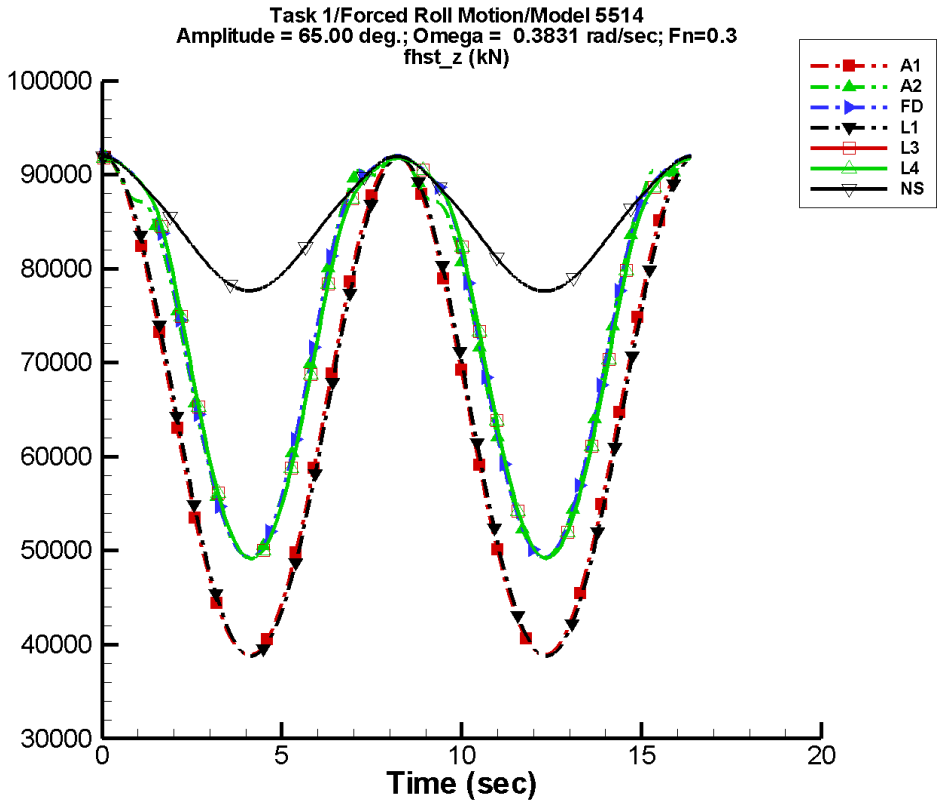
Figure D–294. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–587. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.83E+04 | 1.56 | -97 | 1.35E+04 | 90 |
| A2 | 8.47E+04 | 1.87E+03 | -14 | 7.49E+03 | 87 |
| FD | 8.63E+04 | 70.1 | -59 | 6.75E+03 | 90 |
| L1 | 7.82E+04 | 7.89 | 162 | 1.35E+04 | 87 |
| L3 | 8.60E+04 | 45.0 | -27 | 6.63E+03 | 87 |
| L4 | 8.60E+04 | 45.0 | -27 | 6.63E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 8.83E+04 | 4.71E-02 | 172 | 3.36E+03 | 90 |

Table D–588. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.50E+04 | 9.20E+04 | 6.50E+04 | 9.19E+04 |
| A2 | 2.76E+04 | 1.18E+05 | 7.22E+04 | 9.19E+04 |
| FD | 7.82E+04 | 9.20E+04 | 7.83E+04 | 9.20E+04 |
| L1 | 6.49E+04 | 9.18E+04 | 6.50E+04 | 9.18E+04 |
| L3 | 7.79E+04 | 9.18E+04 | 7.80E+04 | 9.18E+04 |
| L4 | 7.79E+04 | 9.18E+04 | 7.80E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.50E+04 | 9.20E+04 | 8.51E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

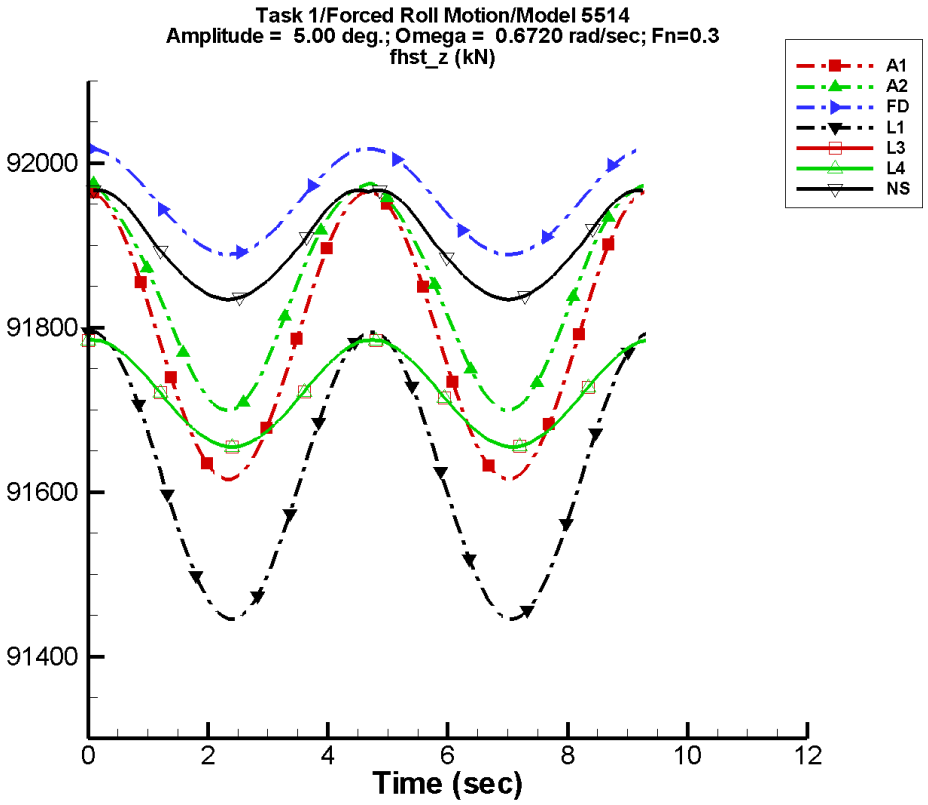
Figure D–295. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–589. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.47E+04 | 6.54 | -97 | 2.65E+04 | 90 |
| A2 | 7.33E+04 | 20.9 | -10 | 2.15E+04 | 91 |
| FD | 7.38E+04 | 138. | -61 | 2.21E+04 | 90 |
| L1 | 6.45E+04 | 33.0 | 162 | 2.65E+04 | 87 |
| L3 | 7.35E+04 | 171. | -9 | 2.17E+04 | 87 |
| L4 | 7.35E+04 | 171. | -9 | 2.17E+04 | 87 |
| NF | — | — | — | — | — |
| NS | 8.47E+04 | 24.3 | -2 | 6.92E+03 | 90 |

Table D–590. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.89E+04 | 9.20E+04 | 3.88E+04 | 9.18E+04 |
| A2 | 4.92E+04 | 9.20E+04 | 4.92E+04 | 9.17E+04 |
| FD | 4.93E+04 | 9.20E+04 | 4.97E+04 | 9.19E+04 |
| L1 | 3.88E+04 | 9.18E+04 | 3.89E+04 | 9.18E+04 |
| L3 | 4.92E+04 | 9.18E+04 | 4.93E+04 | 9.18E+04 |
| L4 | 4.92E+04 | 9.18E+04 | 4.93E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 7.76E+04 | 9.20E+04 | 7.76E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

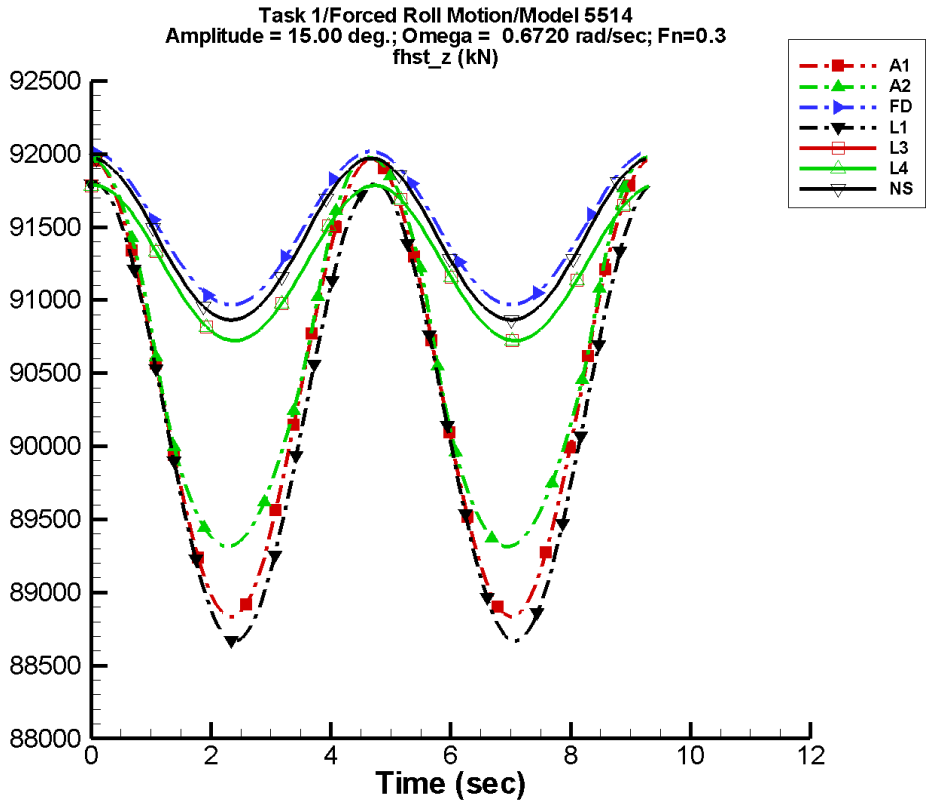
Figure D–296. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–591. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.18E+04 | 2.62E-02 | -43 | 175. | 90 |
| A2 | 9.18E+04 | 0.486 | 0 | 135. | 92 |
| FD | 9.20E+04 | 5.57E-02 | 153 | 64.4 | 90 |
| L1 | 9.16E+04 | 9.82E-03 | 177 | 175. | 85 |
| L3 | 9.17E+04 | 2.78E-02 | 174 | 64.9 | 85 |
| L4 | 9.17E+04 | 2.78E-02 | 174 | 64.9 | 85 |
| NF | — | — | — | — | — |
| NS | 9.19E+04 | 4.61E-03 | -54 | 68.3 | 90 |

Table D–592. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 9.16E+04 | 9.20E+04 | 9.16E+04 | 9.20E+04 |
| A2 | 9.17E+04 | 9.20E+04 | 9.17E+04 | 9.20E+04 |
| FD | 9.19E+04 | 9.20E+04 | 9.19E+04 | 9.20E+04 |
| L1 | 9.14E+04 | 9.18E+04 | 9.14E+04 | 9.18E+04 |
| L3 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| L4 | 9.17E+04 | 9.18E+04 | 9.17E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.18E+04 | 9.20E+04 | 9.18E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

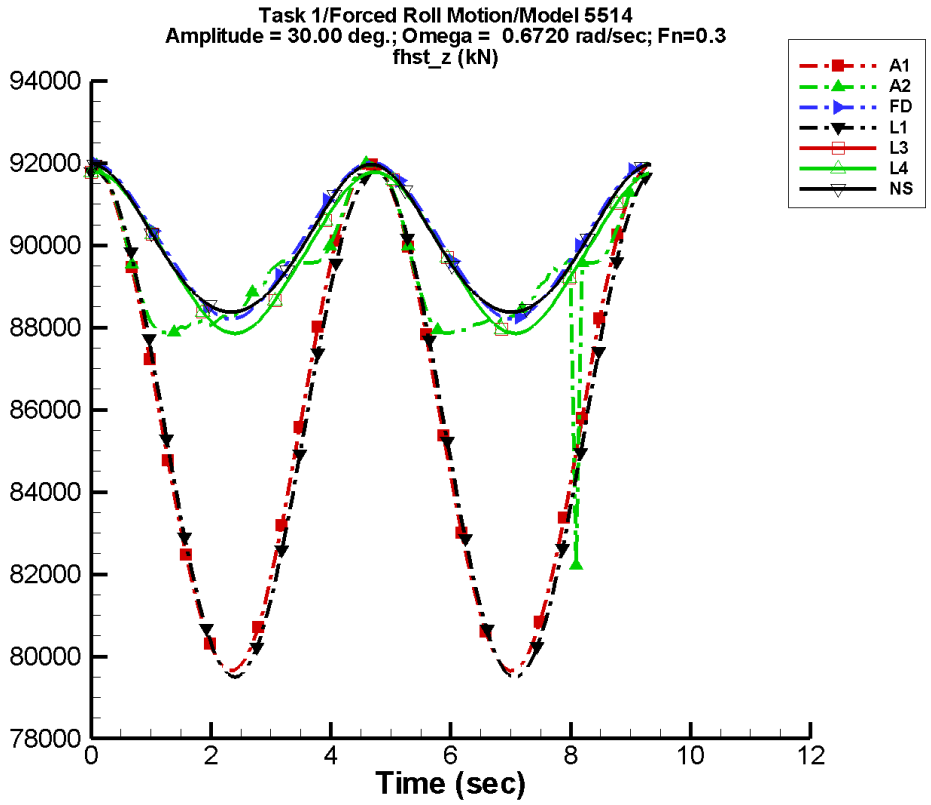
Figure D–297. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–593. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.04E+04 | 0.149 | -166 | 1.57E+03 | 90 |
| A2 | 9.06E+04 | 7.93 | -176 | 1.38E+03 | 91 |
| FD | 9.15E+04 | 0.851 | 150 | 523. | 90 |
| L1 | 9.02E+04 | 0.266 | 175 | 1.56E+03 | 85 |
| L3 | 9.12E+04 | 0.815 | 179 | 531. | 85 |
| L4 | 9.12E+04 | 0.815 | 179 | 531. | 85 |
| NF | — | — | — | — | — |
| NS | 9.14E+04 | 2.34E-02 | -29 | 553. | 90 |

Table D–594. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 8.88E+04 | 9.20E+04 | 8.89E+04 | 9.19E+04 |
| A2 | 8.93E+04 | 9.20E+04 | 8.94E+04 | 9.19E+04 |
| FD | 9.10E+04 | 9.20E+04 | 9.10E+04 | 9.20E+04 |
| L1 | 8.87E+04 | 9.18E+04 | 8.87E+04 | 9.18E+04 |
| L3 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| L4 | 9.07E+04 | 9.18E+04 | 9.07E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 9.09E+04 | 9.20E+04 | 9.09E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

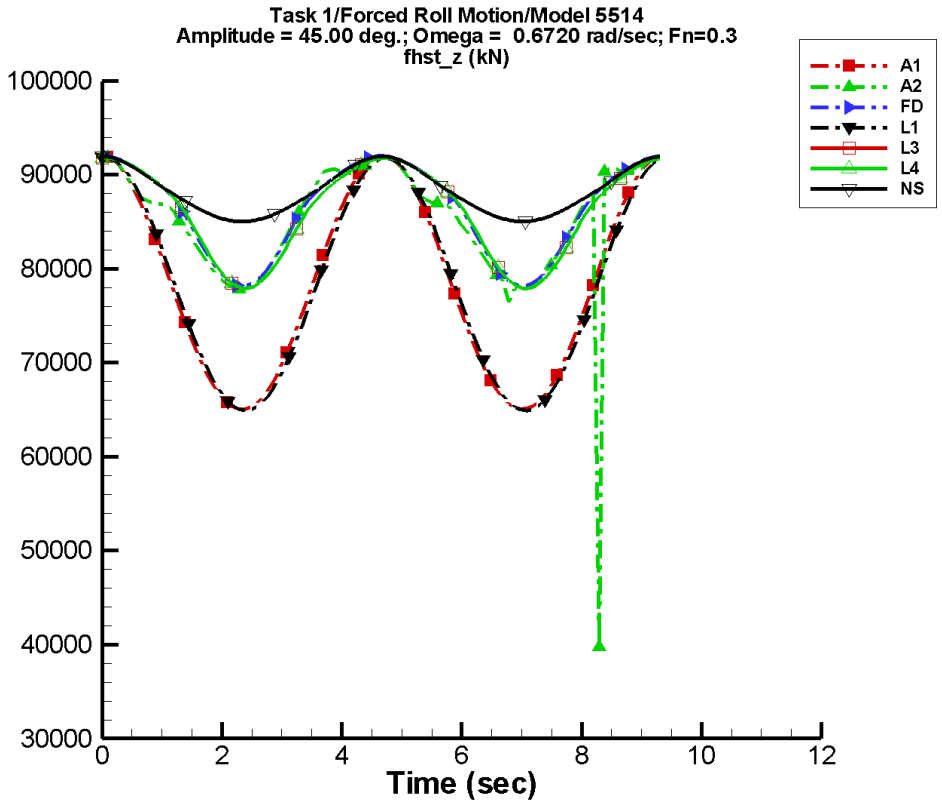
Figure D–298. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–595. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.58E+04 | 2.23 | -170 | 6.16E+03 | 90 |
| A2 | 8.94E+04 | 120. | -52 | 1.70E+03 | 110 |
| FD | 9.01E+04 | 0.295 | -14 | 1.86E+03 | 90 |
| L1 | 8.56E+04 | 2.90 | 179 | 6.15E+03 | 85 |
| L3 | 8.98E+04 | 0.859 | 175 | 1.92E+03 | 85 |
| L4 | 8.98E+04 | 0.859 | 175 | 1.92E+03 | 85 |
| NF | — | — | — | — | — |
| NS | 9.00E+04 | 1.65E-02 | 80 | 1.78E+03 | 90 |

Table D–596. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 7.96E+04 | 9.20E+04 | 7.99E+04 | 9.18E+04 |
| A2 | 8.22E+04 | 9.20E+04 | 8.79E+04 | 9.17E+04 |
| FD | 8.82E+04 | 9.20E+04 | 8.83E+04 | 9.20E+04 |
| L1 | 7.95E+04 | 9.18E+04 | 7.96E+04 | 9.18E+04 |
| L3 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| L4 | 8.79E+04 | 9.18E+04 | 8.79E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.84E+04 | 9.20E+04 | 8.84E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

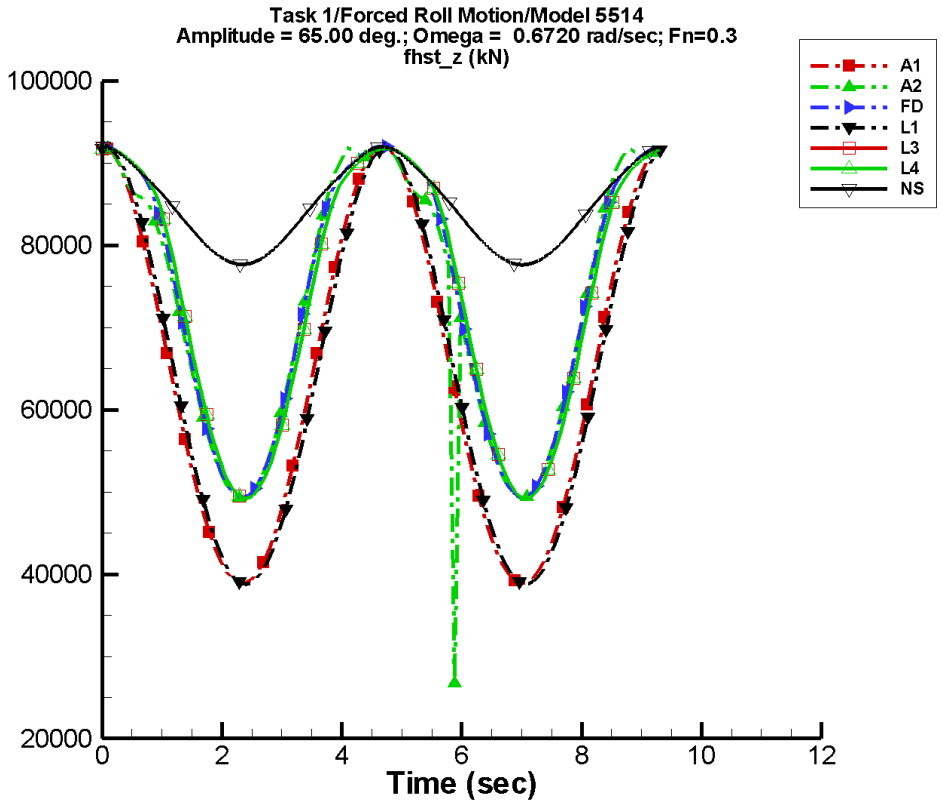
Figure D–299. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–597. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.83E+04 | 11.1 | -170 | 1.35E+04 | 90 |
| A2 | 8.51E+04 | 1.07E+03 | -44 | 6.36E+03 | 91 |
| FD | 8.62E+04 | 96.0 | -29 | 6.72E+03 | 89 |
| L1 | 7.82E+04 | 13.1 | 179 | 1.35E+04 | 85 |
| L3 | 8.60E+04 | 86.3 | 1 | 6.60E+03 | 84 |
| L4 | 8.60E+04 | 86.3 | 1 | 6.60E+03 | 84 |
| NF | — | — | — | — | — |
| NS | 8.83E+04 | 1.99E-02 | 16 | 3.36E+03 | 90 |

Table D–598. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 6.50E+04 | 9.20E+04 | 6.56E+04 | 9.15E+04 |
| A2 | 3.97E+04 | 9.20E+04 | 7.80E+04 | 9.19E+04 |
| FD | 7.82E+04 | 9.20E+04 | 7.86E+04 | 9.19E+04 |
| L1 | 6.49E+04 | 9.18E+04 | 6.51E+04 | 9.18E+04 |
| L3 | 7.79E+04 | 9.18E+04 | 7.81E+04 | 9.18E+04 |
| L4 | 7.79E+04 | 9.18E+04 | 7.81E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 8.50E+04 | 9.20E+04 | 8.51E+04 | 9.19E+04 |




Data identically zero, insufficient, or not available from NFA.

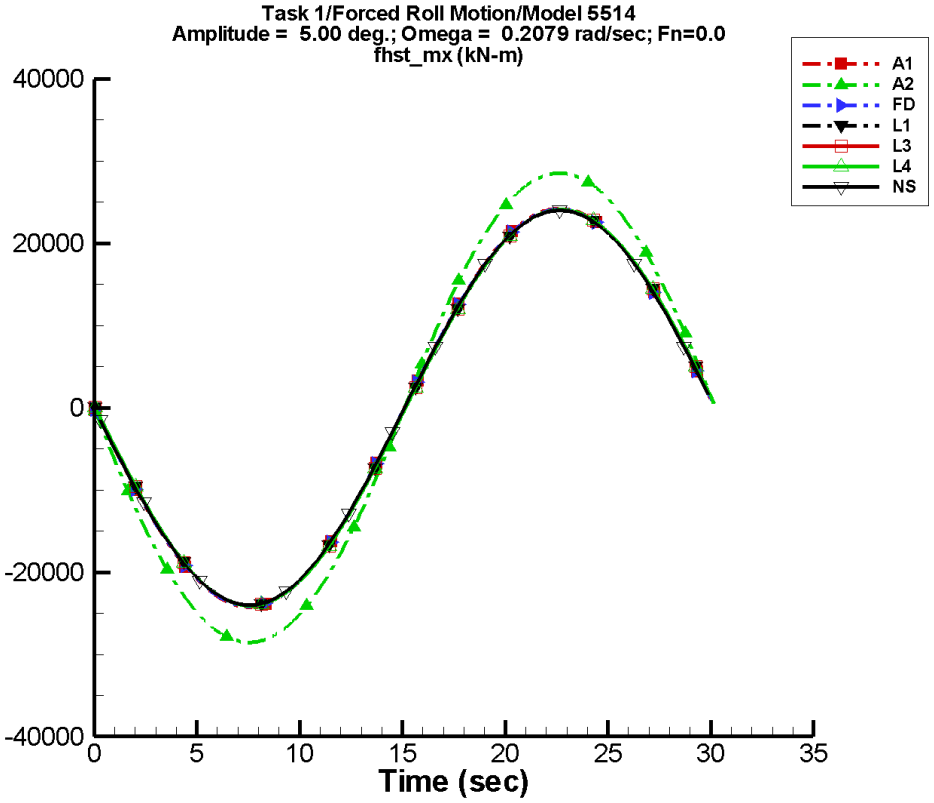
Figure D–300. Time history of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–599. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.47E+04 | 46.8 | -171 | 2.66E+04 | 90 |
| A2 | 7.29E+04 | 1.22E+03 | 36 | 2.15E+04 | 95 |
| FD | 7.37E+04 | 210. | -30 | 2.20E+04 | 89 |
| L1 | 6.45E+04 | 53.3 | 179 | 2.65E+04 | 86 |
| L3 | 7.36E+04 | 226. | 0 | 2.16E+04 | 85 |
| L4 | 7.36E+04 | 226. | 0 | 2.16E+04 | 85 |
| NF | — | — | — | — | — |
| NS | 8.47E+04 | 23.5 | 0 | 6.92E+03 | 90 |

Table D–600. Minimum and maximum of of $F_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | 3.89E+04 | 9.20E+04 | 4.00E+04 | 9.11E+04 |
| A2 | 2.67E+04 | 9.20E+04 | 5.05E+04 | 9.15E+04 |
| FD | 4.93E+04 | 9.20E+04 | 5.03E+04 | 9.19E+04 |
| L1 | 3.88E+04 | 9.18E+04 | 3.92E+04 | 9.18E+04 |
| L3 | 4.92E+04 | 9.18E+04 | 4.97E+04 | 9.18E+04 |
| L4 | 4.92E+04 | 9.18E+04 | 4.97E+04 | 9.18E+04 |
| NF | — | — | — | — |
| NS | 7.76E+04 | 9.20E+04 | 7.76E+04 | 9.20E+04 |




Data identically zero, insufficient, or not available from NFA.

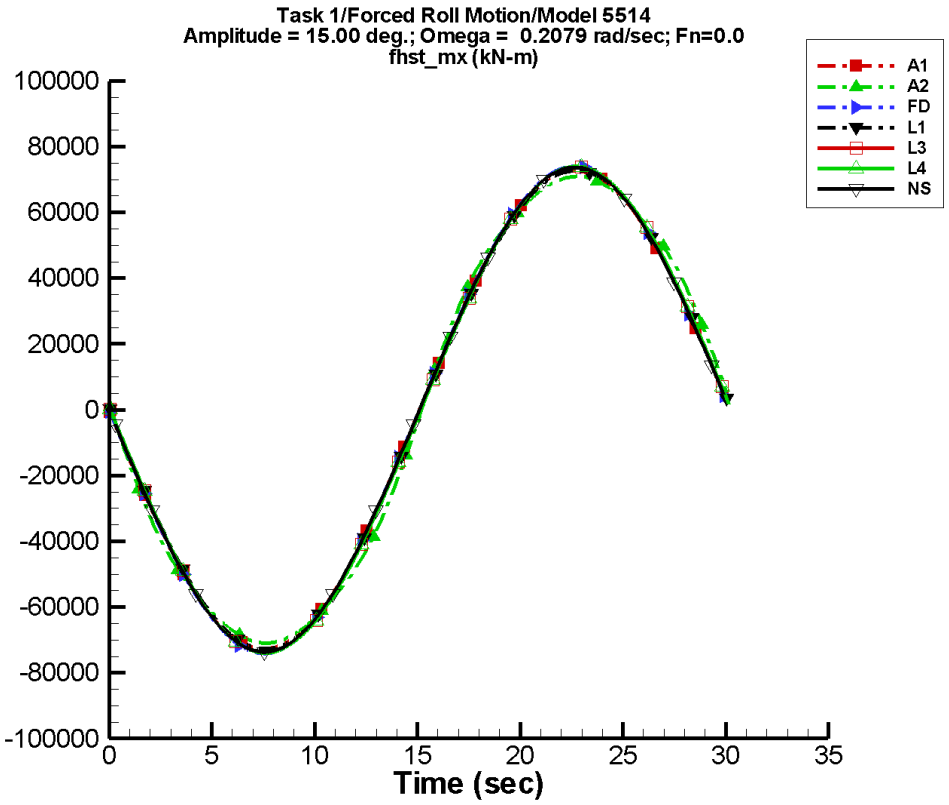
Figure D–301. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–601. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.99E-02 | 2.42E+04 | 180 | 2.44E-02 | 157 |
| A2 | -11.9 | 2.89E+04 | -180 | 63.8 | -116 |
| FD | 0.255 | 2.41E+04 | 180 | 1.14 | 54 |
| L1 | 0.426 | 2.40E+04 | 179 | 1.60 | 87 |
| L3 | 1.64 | 2.41E+04 | 179 | 6.13 | 86 |
| L4 | 1.64 | 2.41E+04 | 179 | 6.13 | 86 |
| NF | — | — | — | — | — |
| NS | -1.63E-03 | 2.40E+04 | -180 | 2.32E-03 | 175 |

Table D–602. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.42E+04 | 2.42E+04 | -2.42E+04 | 2.42E+04 |
| A2 | -2.85E+04 | 2.85E+04 | -2.86E+04 | 2.85E+04 |
| FD | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| L1 | -2.40E+04 | 2.40E+04 | -2.40E+04 | 2.40E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| L4 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| NF | — | — | — | — |
| NS | -2.40E+04 | 2.40E+04 | -2.38E+04 | 2.38E+04 |




Data identically zero, insufficient, or not available from NFA.

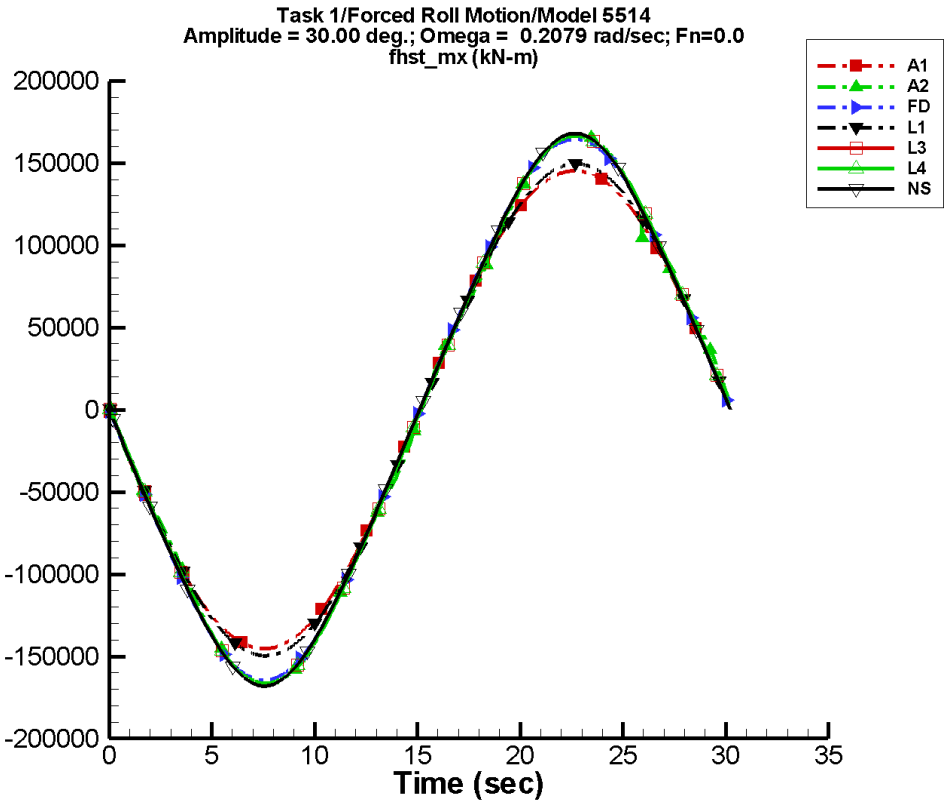
Figure D–302. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–603. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.54E-02 | 7.26E+04 | 180 | 7.25E-02 | 162 |
| A2 | -117. | 7.32E+04 | 179 | 587. | -116 |
| FD | 13.9 | 7.36E+04 | 180 | 70.6 | 56 |
| L1 | 10.9 | 7.25E+04 | 179 | 42.9 | 87 |
| L3 | 28.1 | 7.35E+04 | 179 | 110. | 87 |
| L4 | 28.1 | 7.35E+04 | 179 | 110. | 87 |
| NF | — | — | — | — | — |
| NS | -1.99E-03 | 7.32E+04 | -180 | 7.14E-03 | -127 |

Table D–604. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.26E+04 | 7.26E+04 | -7.27E+04 | 7.26E+04 |
| A2 | -7.09E+04 | 7.09E+04 | -7.09E+04 | 7.09E+04 |
| FD | -7.41E+04 | 7.41E+04 | -7.40E+04 | 7.40E+04 |
| L1 | -7.27E+04 | 7.27E+04 | -7.26E+04 | 7.26E+04 |
| L3 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| L4 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| NF | — | — | — | — |
| NS | -7.37E+04 | 7.37E+04 | -7.29E+04 | 7.29E+04 |




Data identically zero, insufficient, or not available from NFA.

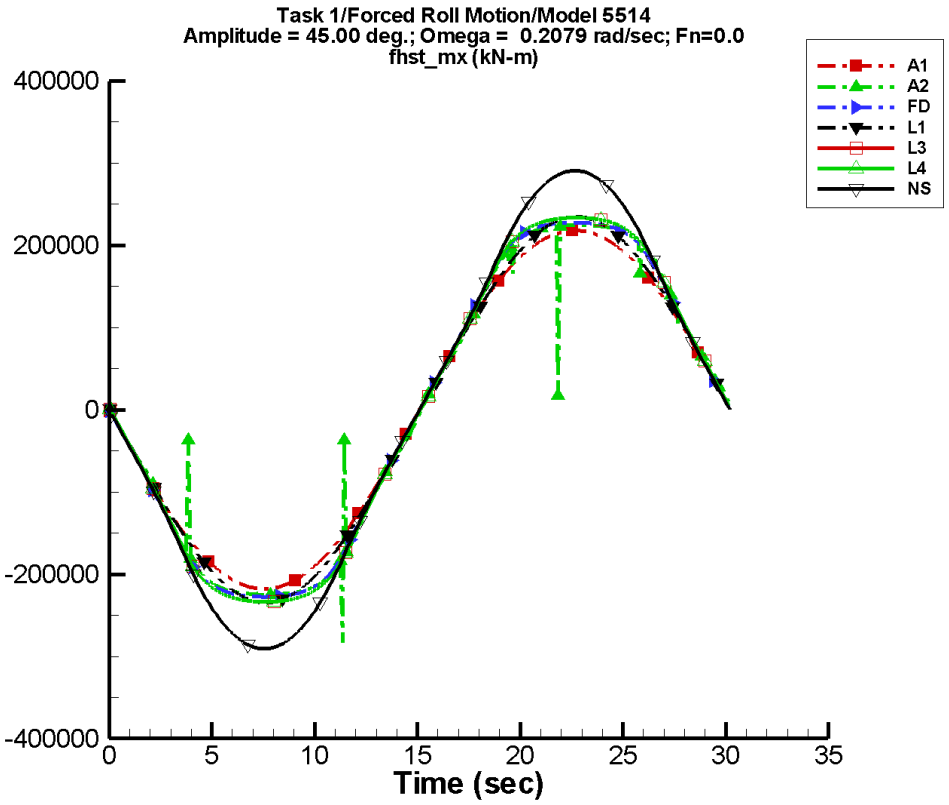
Figure D–303. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–605. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.110 | 1.45E+05 | 180 | 0.141 | 163 |
| A2 | 25.9 | 1.60E+05 | 179 | 1.03E+03 | 41 |
| FD | 156. | 1.59E+05 | 180 | 798. | 57 |
| L1 | 86.0 | 1.48E+05 | 179 | 339. | 87 |
| L3 | 365. | 1.60E+05 | 179 | 1.44E+03 | 87 |
| L4 | 365. | 1.60E+05 | 179 | 1.44E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 4.52E-04 | 1.60E+05 | -180 | 7.14E-03 | -133 |

Table D–606. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.45E+05 | 1.45E+05 | -1.45E+05 | 1.45E+05 |
| A2 | -1.67E+05 | 1.67E+05 | -1.67E+05 | 1.67E+05 |
| FD | -1.65E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| L1 | -1.50E+05 | 1.50E+05 | -1.50E+05 | 1.50E+05 |
| L3 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| L4 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| NF | — | — | — | — |
| NS | -1.68E+05 | 1.68E+05 | -1.67E+05 | 1.67E+05 |




Data identically zero, insufficient, or not available from NFA.

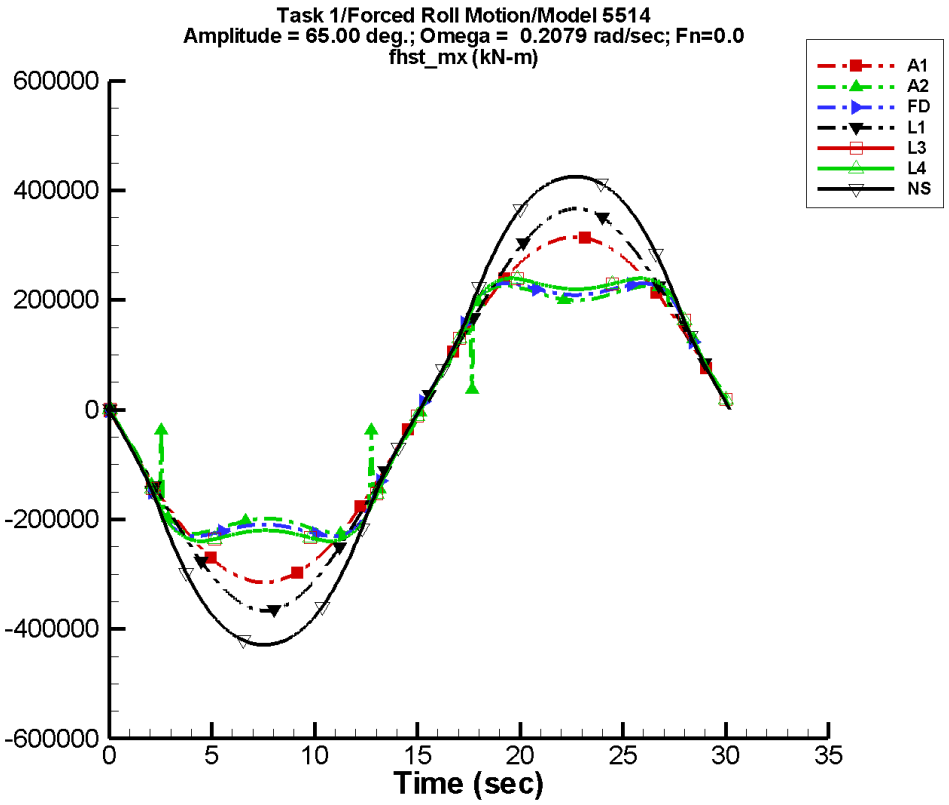
Figure D–304. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–607. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.189 | 2.18E+05 | 180 | 0.226 | 157 |
| A2 | -646. | 2.34E+05 | 179 | 1.46E+03 | 120 |
| FD | 34.7 | 2.38E+05 | 180 | 555. | 155 |
| L1 | 284. | 2.30E+05 | 179 | 1.12E+03 | 87 |
| L3 | 86.6 | 2.43E+05 | 179 | 180. | 66 |
| L4 | 86.6 | 2.43E+05 | 179 | 180. | 66 |
| NF | — | — | — | — | — |
| NS | -0.722 | 2.75E+05 | -180 | 1.18 | 91 |

Table D–608. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.18E+05 | -2.18E+05 | 2.18E+05 |
| A2 | -2.83E+05 | 2.25E+05 | -2.25E+05 | 2.27E+05 |
| FD | -2.27E+05 | 2.27E+05 | -2.28E+05 | 2.27E+05 |
| L1 | -2.35E+05 | 2.35E+05 | -2.35E+05 | 2.35E+05 |
| L3 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| L4 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| NF | — | — | — | — |
| NS | -2.91E+05 | 2.91E+05 | -2.90E+05 | 2.90E+05 |




Data identically zero, insufficient, or not available from NFA.

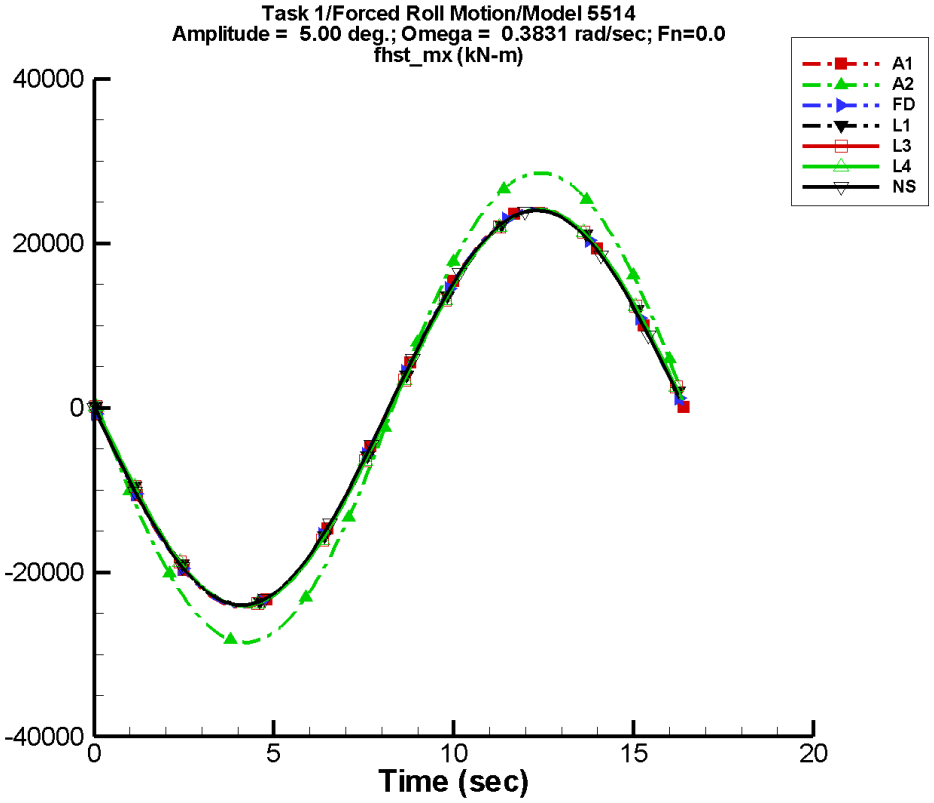
Figure D–305. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–609. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.262 | 3.15E+05 | 180 | 0.310 | 156 |
| A2 | -722. | 2.52E+05 | 180 | 7.77E+03 | -135 |
| FD | -1.13E+03 | 2.61E+05 | -179 | 6.68E+03 | -129 |
| L1 | 824. | 3.53E+05 | 179 | 3.24E+03 | 87 |
| L3 | -2.64E+03 | 2.71E+05 | 179 | 1.06E+04 | -92 |
| L4 | -2.64E+03 | 2.71E+05 | 179 | 1.06E+04 | -92 |
| NF | — | — | — | — | — |
| NS | -850. | 4.21E+05 | 180 | 1.05E+03 | 90 |

Table D–610. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.15E+05 | 3.15E+05 | -3.15E+05 | 3.14E+05 |
| A2 | -2.27E+05 | 2.27E+05 | -2.26E+05 | 2.26E+05 |
| FD | -2.31E+05 | 2.31E+05 | -2.30E+05 | 2.30E+05 |
| L1 | -3.67E+05 | 3.67E+05 | -3.67E+05 | 3.67E+05 |
| L3 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.40E+05 |
| L4 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.40E+05 |
| NF | — | — | — | — |
| NS | -4.29E+05 | 4.25E+05 | -4.29E+05 | 4.25E+05 |




Data identically zero, insufficient, or not available from NFA.

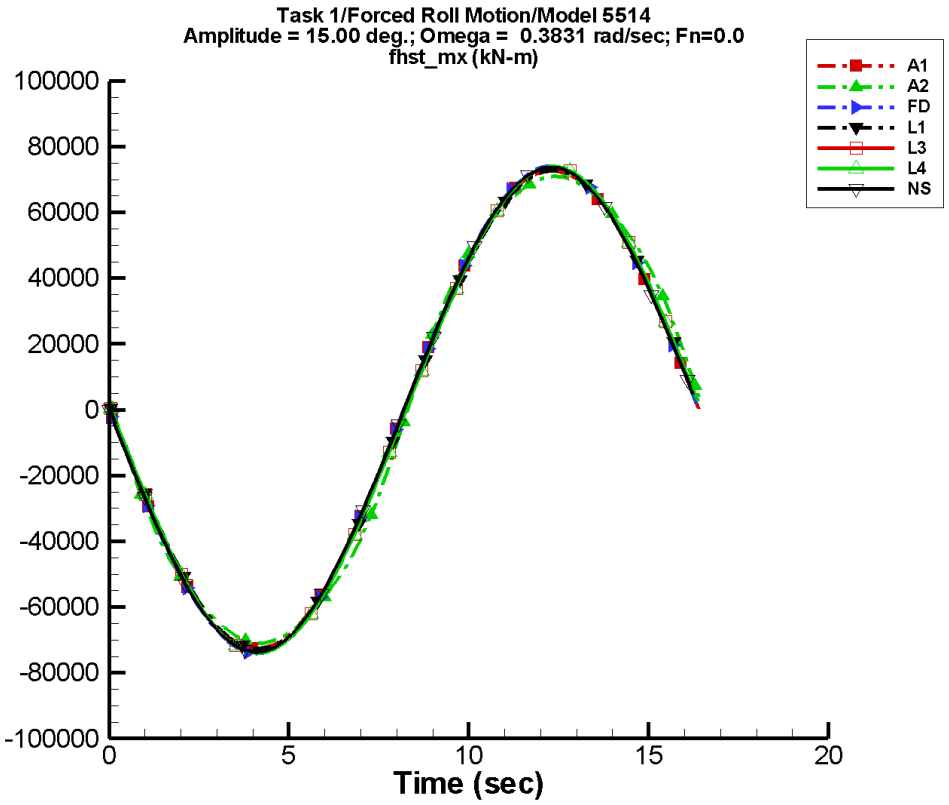
Figure D–306. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–611. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.36E-03 | 2.42E+04 | -180 | 1.26E-03 | 145 |
| A2 | -11.2 | 2.89E+04 | 178 | 64.1 | -120 |
| FD | 0.295 | 2.41E+04 | 180 | 1.60 | 81 |
| L1 | 0.247 | 2.40E+04 | 179 | 0.747 | 28 |
| L3 | 1.54 | 2.41E+04 | 179 | 3.10 | 41 |
| L4 | 1.54 | 2.41E+04 | 179 | 3.10 | 41 |
| NF | — | — | — | — | — |
| NS | -4.64E-04 | 2.40E+04 | 180 | 3.73E-03 | 176 |

Table D–612. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.42E+04 | 2.42E+04 | -2.43E+04 | 2.41E+04 |
| A2 | -2.85E+04 | 2.85E+04 | -2.86E+04 | 2.84E+04 |
| FD | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.40E+04 |
| L1 | -2.40E+04 | 2.40E+04 | -2.40E+04 | 2.40E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| L4 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| NF | — | — | — | — |
| NS | -2.40E+04 | 2.40E+04 | -2.38E+04 | 2.38E+04 |




Data identically zero, insufficient, or not available from NFA.

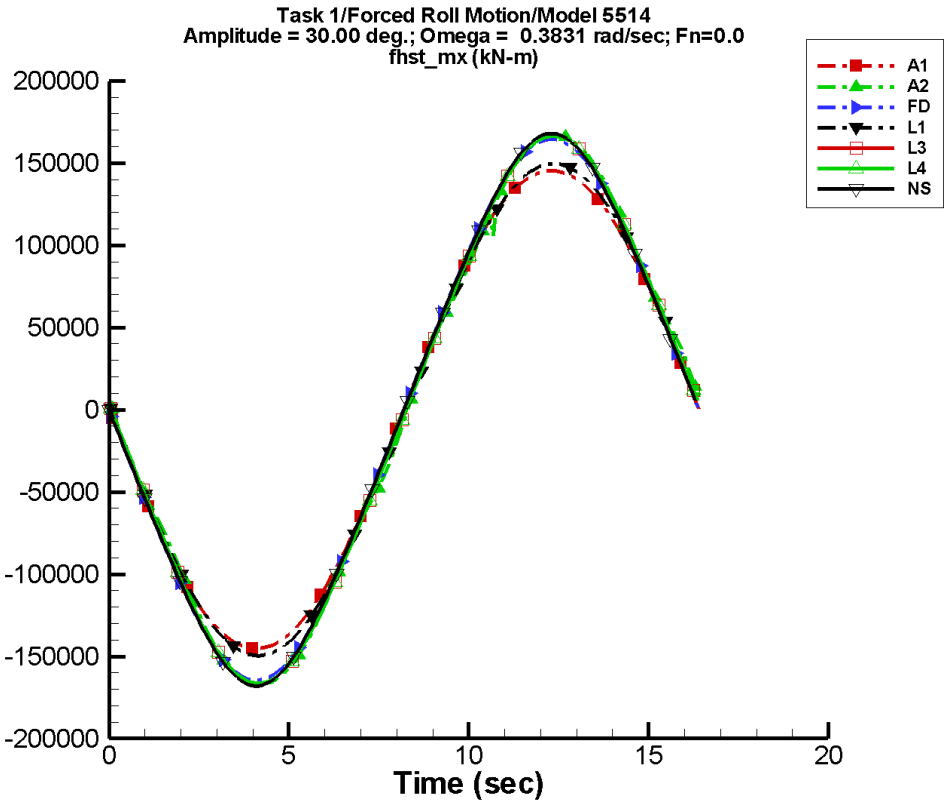
Figure D–307. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–613. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.24E-03 | 7.26E+04 | -180 | 9.49E-03 | -42 |
| A2 | -110. | 7.31E+04 | 178 | 601. | -118 |
| FD | 14.5 | 7.36E+04 | 180 | 96.9 | 76 |
| L1 | 9.88 | 7.25E+04 | 179 | 20.1 | 28 |
| L3 | 26.6 | 7.35E+04 | 179 | 51.7 | 31 |
| L4 | 26.6 | 7.35E+04 | 179 | 51.7 | 31 |
| NF | — | — | — | — | — |
| NS | 5.78E-03 | 7.32E+04 | 180 | 8.83E-03 | 167 |

Table D–614. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.26E+04 | 7.26E+04 | -7.28E+04 | 7.24E+04 |
| A2 | -7.09E+04 | 7.09E+04 | -7.10E+04 | 7.07E+04 |
| FD | -7.41E+04 | 7.41E+04 | -7.38E+04 | 7.38E+04 |
| L1 | -7.27E+04 | 7.27E+04 | -7.26E+04 | 7.26E+04 |
| L3 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| L4 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| NF | — | — | — | — |
| NS | -7.37E+04 | 7.37E+04 | -7.29E+04 | 7.29E+04 |




Data identically zero, insufficient, or not available from NFA.

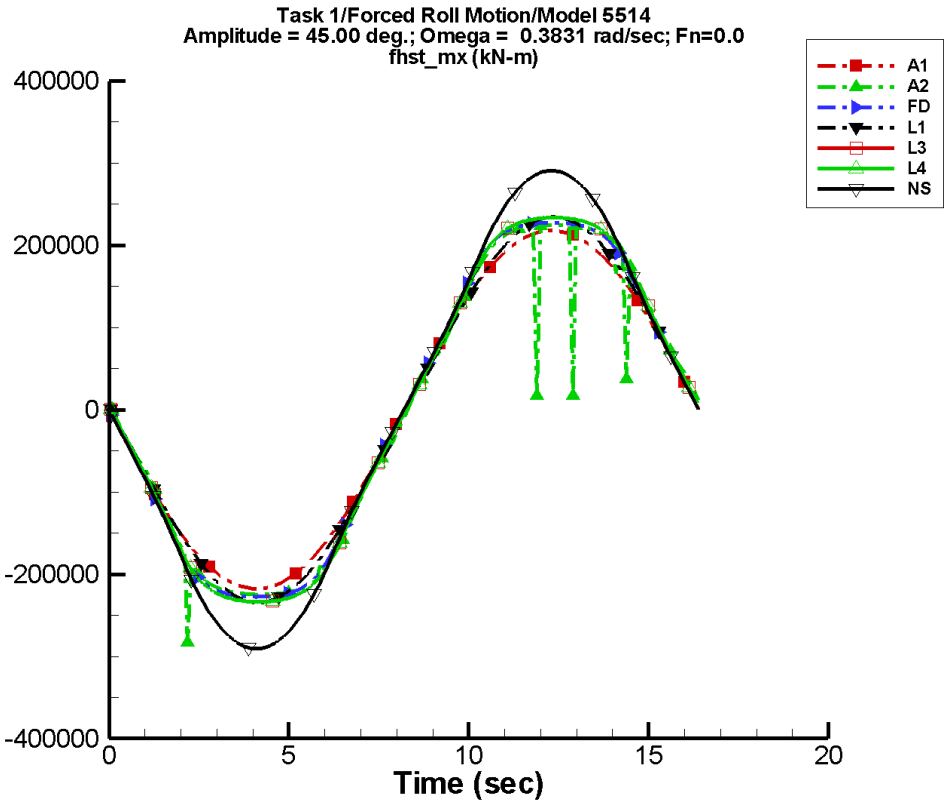
Figure D–308. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–615. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.30E-02 | 1.45E+05 | -180 | 1.36E-02 | -91 |
| A2 | -41.7 | 1.60E+05 | 178 | 896. | 56 |
| FD | 158. | 1.59E+05 | 180 | 1.08E+03 | 76 |
| L1 | 82.2 | 1.48E+05 | 179 | 159. | 28 |
| L3 | 352. | 1.60E+05 | 178 | 675. | 26 |
| L4 | 352. | 1.60E+05 | 178 | 675. | 26 |
| NF | — | — | — | — | — |
| NS | -1.08E-03 | 1.60E+05 | 180 | 4.25E-03 | 1 |

Table D–616. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.45E+05 | 1.45E+05 | -1.46E+05 | 1.45E+05 |
| A2 | -1.67E+05 | 1.67E+05 | -1.67E+05 | 1.66E+05 |
| FD | -1.64E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| L1 | -1.50E+05 | 1.50E+05 | -1.49E+05 | 1.49E+05 |
| L3 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| L4 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| NF | — | — | — | — |
| NS | -1.68E+05 | 1.68E+05 | -1.67E+05 | 1.67E+05 |




Data identically zero, insufficient, or not available from NFA.

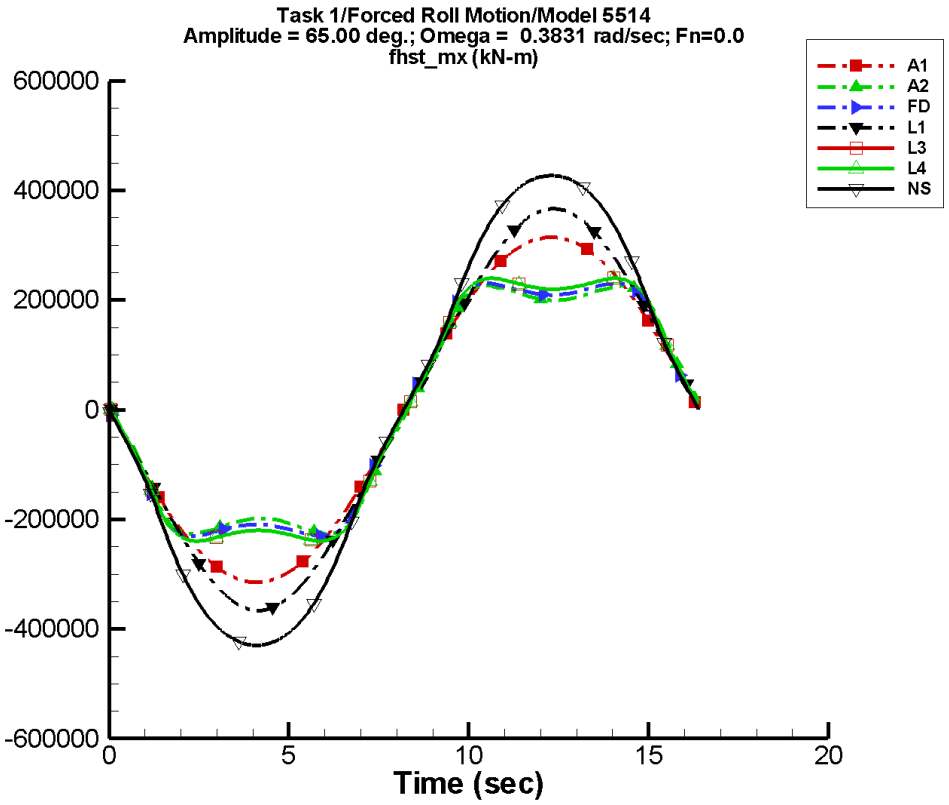
Figure D–309. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–617. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.91E-02 | 2.18E+05 | -180 | 3.03E-03 | -9 |
| A2 | -3.89E+03 | 2.30E+05 | 178 | 4.54E+03 | 81 |
| FD | -125. | 2.38E+05 | 180 | 461. | -68 |
| L1 | 276. | 2.30E+05 | 179 | 526. | 29 |
| L3 | 185. | 2.43E+05 | 179 | 511. | 74 |
| L4 | 185. | 2.43E+05 | 179 | 511. | 74 |
| NF | — | — | — | — | — |
| NS | 0.993 | 2.75E+05 | -180 | 1.57 | -90 |

Table D–618. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.18E+05 | -2.19E+05 | 2.17E+05 |
| A2 | -2.83E+05 | 2.25E+05 | -2.26E+05 | 2.15E+05 |
| FD | -2.27E+05 | 2.27E+05 | -2.27E+05 | 2.27E+05 |
| L1 | -2.35E+05 | 2.35E+05 | -2.34E+05 | 2.34E+05 |
| L3 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| L4 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| NF | — | — | — | — |
| NS | -2.91E+05 | 2.91E+05 | -2.90E+05 | 2.90E+05 |




Data identically zero, insufficient, or not available from NFA.

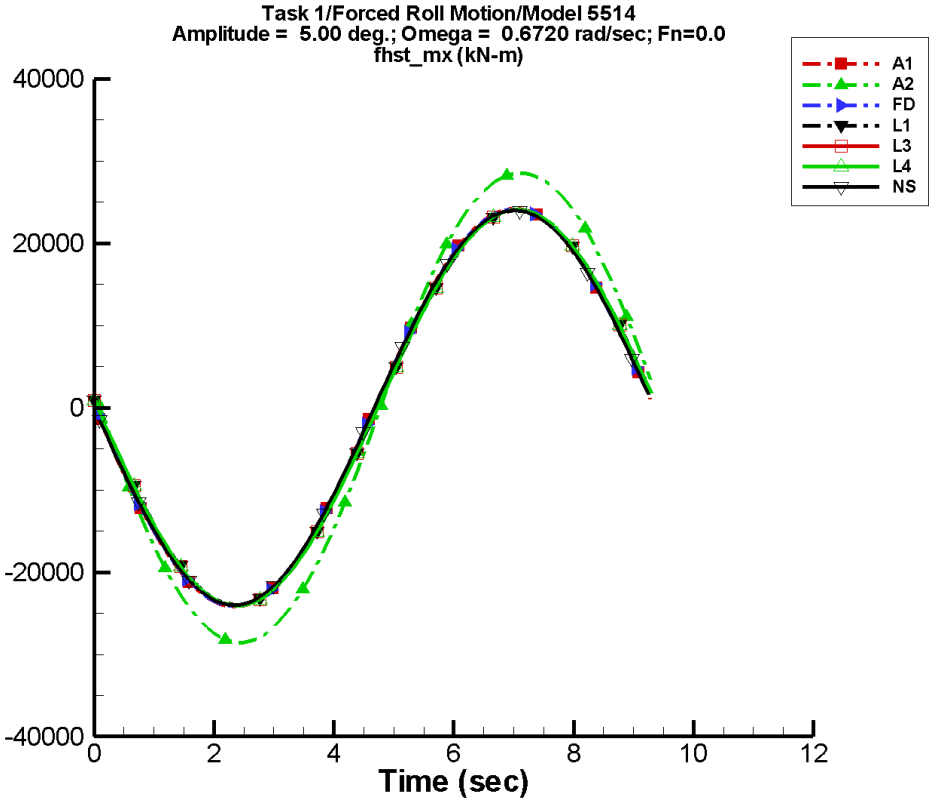
Figure D–310. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–619. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.96E-02 | 3.15E+05 | -180 | 3.08E-03 | 174 |
| A2 | -740. | 2.53E+05 | 179 | 7.95E+03 | -129 |
| FD | -1.28E+03 | 2.60E+05 | -179 | 9.34E+03 | -104 |
| L1 | 801. | 3.53E+05 | 178 | 1.53E+03 | 29 |
| L3 | -2.44E+03 | 2.74E+05 | 180 | 4.88E+03 | -165 |
| L4 | -2.44E+03 | 2.74E+05 | 180 | 4.88E+03 | -165 |
| NF | — | — | — | — | — |
| NS | -657. | 4.22E+05 | 180 | 776. | 90 |

Table D–620. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.15E+05 | 3.15E+05 | -3.16E+05 | 3.14E+05 |
| A2 | -2.27E+05 | 2.27E+05 | -2.24E+05 | 2.24E+05 |
| FD | -2.31E+05 | 2.31E+05 | -2.29E+05 | 2.29E+05 |
| L1 | -3.67E+05 | 3.67E+05 | -3.66E+05 | 3.66E+05 |
| L3 | -2.40E+05 | 2.40E+05 | -2.39E+05 | 2.39E+05 |
| L4 | -2.40E+05 | 2.40E+05 | -2.39E+05 | 2.39E+05 |
| NF | — | — | — | — |
| NS | -4.30E+05 | 4.27E+05 | -4.30E+05 | 4.27E+05 |




Data identically zero, insufficient, or not available from NFA.

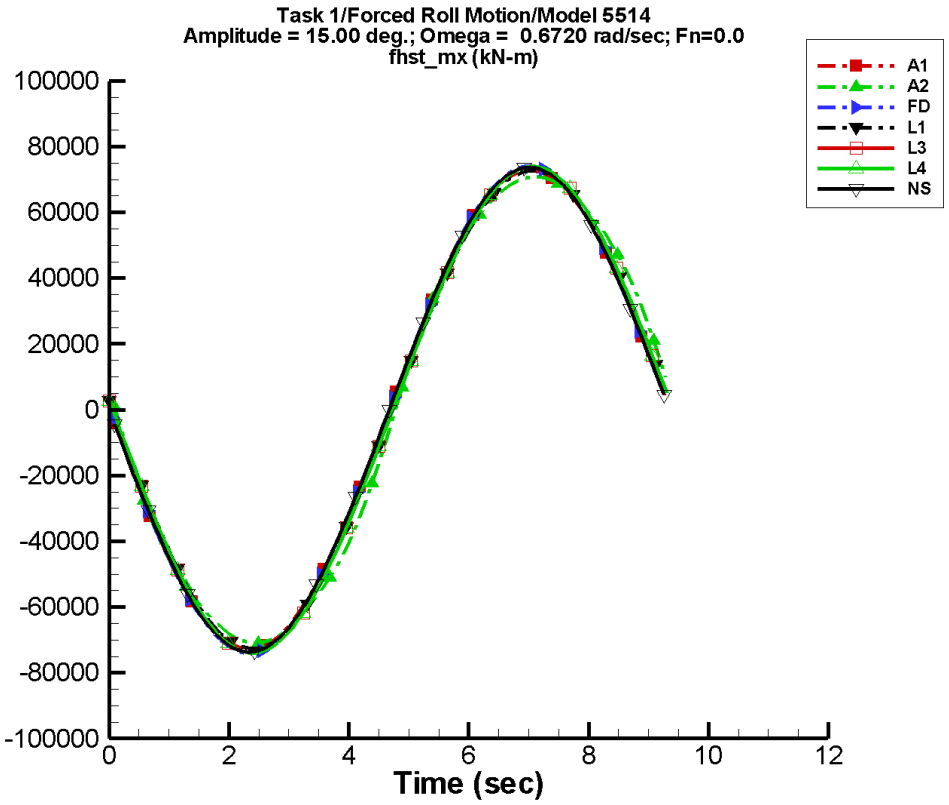
Figure D–311. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–621. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.47E-02 | 2.42E+04 | 180 | 4.27E-02 | 162 |
| A2 | -20.7 | 2.89E+04 | 176 | 47.0 | -140 |
| FD | 0.689 | 2.41E+04 | 180 | 1.13 | 148 |
| L1 | -3.69E-02 | 2.40E+04 | 178 | 0.777 | 23 |
| L3 | 1.16 | 2.41E+04 | 178 | 3.09 | 42 |
| L4 | 1.16 | 2.41E+04 | 178 | 3.09 | 42 |
| NF | — | — | — | — | — |
| NS | 1.73E-03 | 2.40E+04 | -180 | 1.97E-03 | -128 |

Table D–622. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.42E+04 | 2.42E+04 | -2.39E+04 | 2.39E+04 |
| A2 | -2.85E+04 | 2.85E+04 | -2.82E+04 | 2.82E+04 |
| FD | -2.41E+04 | 2.41E+04 | -2.39E+04 | 2.40E+04 |
| L1 | -2.40E+04 | 2.40E+04 | -2.39E+04 | 2.39E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.40E+04 |
| L4 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.40E+04 |
| NF | — | — | — | — |
| NS | -2.40E+04 | 2.40E+04 | -2.38E+04 | 2.38E+04 |




Data identically zero, insufficient, or not available from NFA.

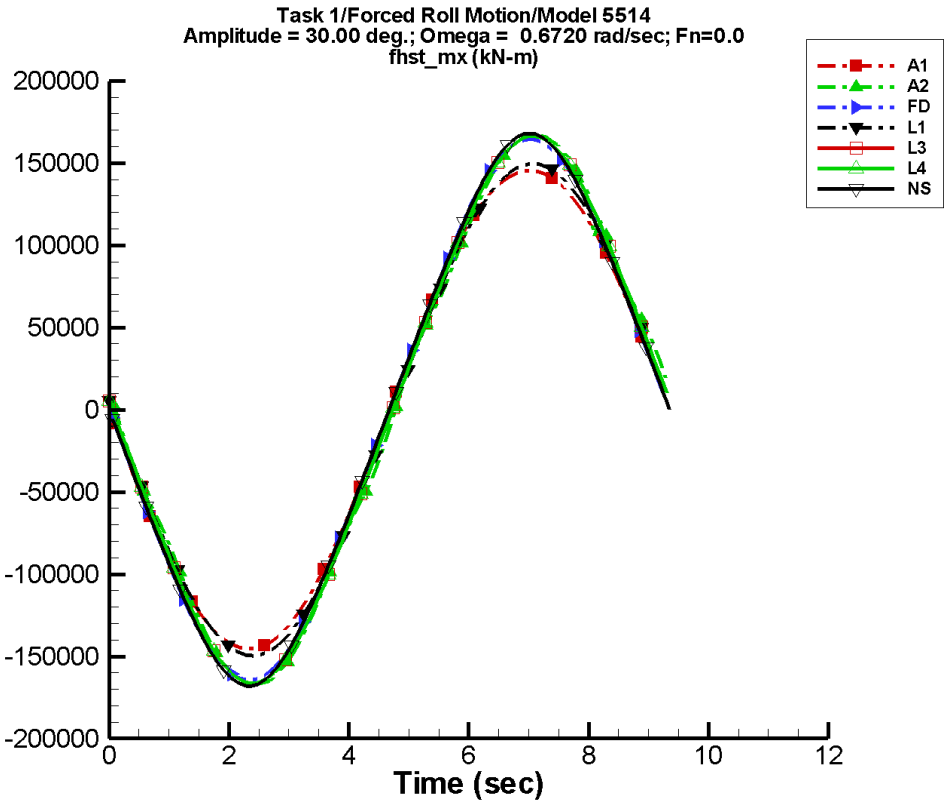
Figure D–312. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–623. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.91E-02 | 7.26E+04 | 180 | 0.125 | 164 |
| A2 | -183. | 7.33E+04 | 176 | 462. | -133 |
| FD | 37.1 | 7.36E+04 | 180 | 68.6 | 148 |
| L1 | 9.48 | 7.25E+04 | 178 | 20.7 | 25 |
| L3 | 26.6 | 7.35E+04 | 178 | 52.8 | 27 |
| L4 | 26.6 | 7.35E+04 | 178 | 52.8 | 27 |
| NF | — | — | — | — | — |
| NS | 5.54E-03 | 7.32E+04 | 180 | 1.03E-02 | -140 |

Table D–624. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.26E+04 | 7.26E+04 | -7.18E+04 | 7.18E+04 |
| A2 | -7.09E+04 | 7.09E+04 | -7.01E+04 | 7.01E+04 |
| FD | -7.41E+04 | 7.41E+04 | -7.32E+04 | 7.37E+04 |
| L1 | -7.27E+04 | 7.27E+04 | -7.24E+04 | 7.23E+04 |
| L3 | -7.40E+04 | 7.39E+04 | -7.36E+04 | 7.36E+04 |
| L4 | -7.40E+04 | 7.39E+04 | -7.36E+04 | 7.36E+04 |
| NF | — | — | — | — |
| NS | -7.37E+04 | 7.37E+04 | -7.29E+04 | 7.29E+04 |




Data identically zero, insufficient, or not available from NFA.

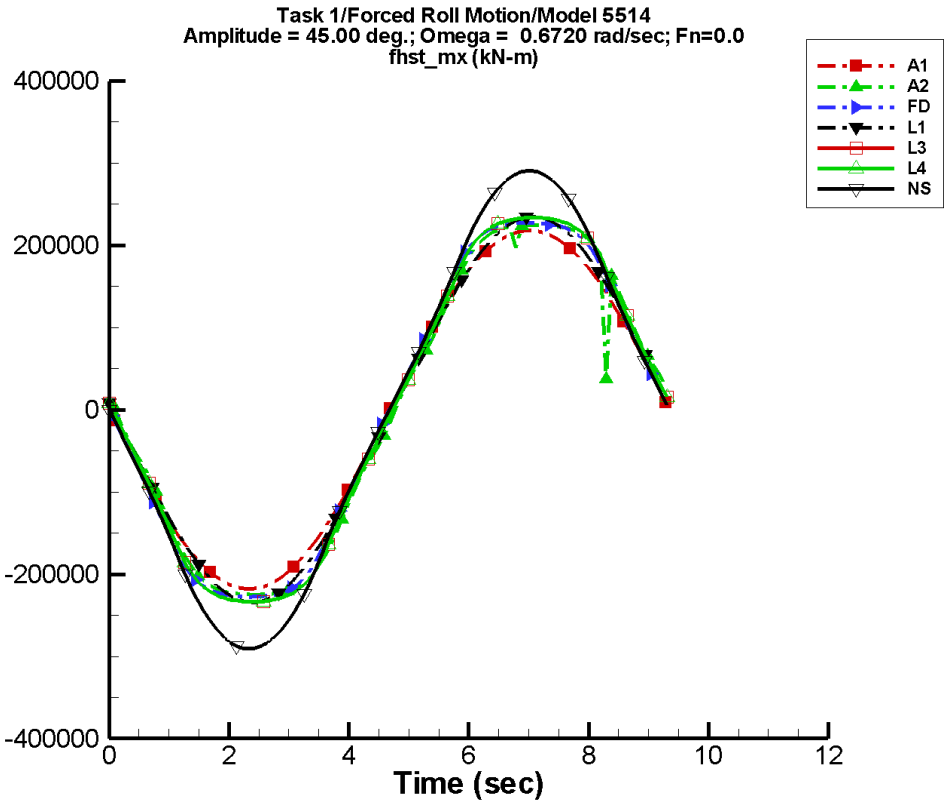
Figure D–313. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–625. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.138 | 1.45E+05 | 180 | 0.256 | 161 |
| A2 | 76.7 | 1.59E+05 | 176 | 1.13E+03 | 10 |
| FD | 406. | 1.60E+05 | 180 | 766. | 146 |
| L1 | 83.1 | 1.48E+05 | 178 | 163. | 25 |
| L3 | 362. | 1.60E+05 | 177 | 696. | 22 |
| L4 | 362. | 1.60E+05 | 177 | 696. | 22 |
| NF | — | — | — | — | — |
| NS | -2.46E-02 | 1.60E+05 | 180 | 6.33E-02 | -169 |

Table D–626. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.45E+05 | 1.45E+05 | -1.44E+05 | 1.44E+05 |
| A2 | -1.67E+05 | 1.67E+05 | -1.65E+05 | 1.65E+05 |
| FD | -1.64E+05 | 1.64E+05 | -1.62E+05 | 1.63E+05 |
| L1 | -1.50E+05 | 1.50E+05 | -1.49E+05 | 1.49E+05 |
| L3 | -1.66E+05 | 1.66E+05 | -1.65E+05 | 1.65E+05 |
| L4 | -1.66E+05 | 1.66E+05 | -1.65E+05 | 1.65E+05 |
| NF | — | — | — | — |
| NS | -1.68E+05 | 1.68E+05 | -1.67E+05 | 1.67E+05 |




Data identically zero, insufficient, or not available from NFA.

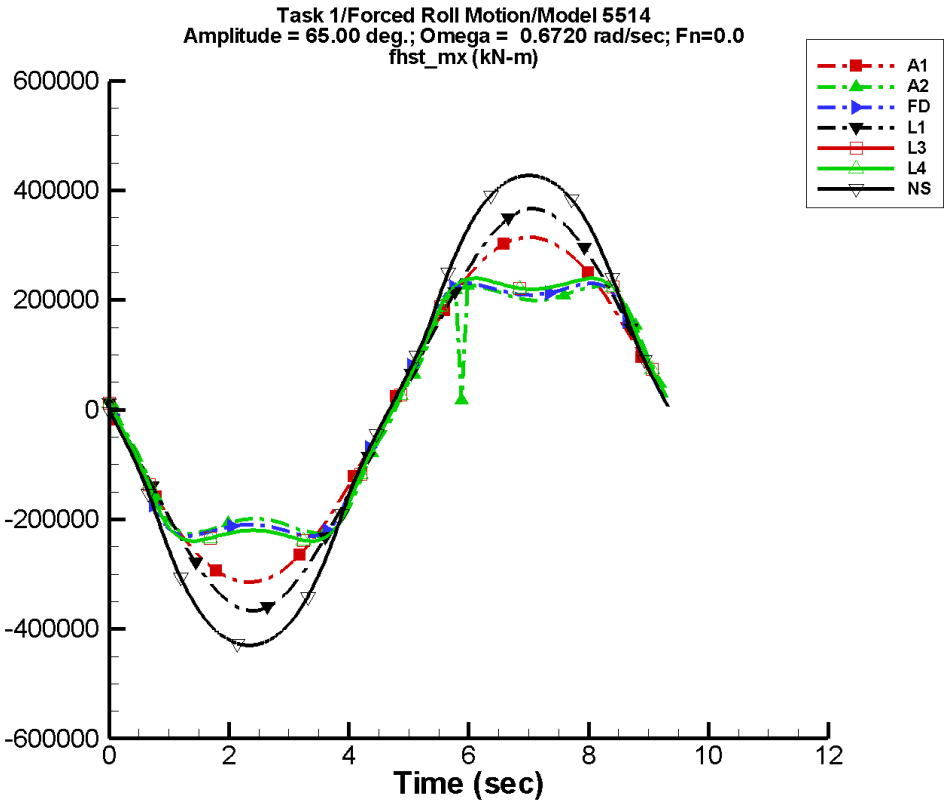
Figure D–314. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–627. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.227 | 2.18E+05 | 180 | 0.368 | 163 |
| A2 | -2.05E+03 | 2.35E+05 | 177 | 2.34E+03 | 28 |
| FD | -229. | 2.38E+05 | -180 | 651. | 33 |
| L1 | 280. | 2.30E+05 | 178 | 540. | 25 |
| L3 | -42.8 | 2.43E+05 | 178 | 838. | 109 |
| L4 | -42.8 | 2.43E+05 | 178 | 838. | 109 |
| NF | — | — | — | — | — |
| NS | -0.385 | 2.75E+05 | -180 | 0.594 | 85 |

Table D–628. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.18E+05 | -2.15E+05 | 2.15E+05 |
| A2 | -2.25E+05 | 2.25E+05 | -2.24E+05 | 2.24E+05 |
| FD | -2.27E+05 | 2.27E+05 | -2.27E+05 | 2.28E+05 |
| L1 | -2.35E+05 | 2.35E+05 | -2.34E+05 | 2.34E+05 |
| L3 | -2.34E+05 | 2.34E+05 | -2.33E+05 | 2.33E+05 |
| L4 | -2.34E+05 | 2.34E+05 | -2.33E+05 | 2.33E+05 |
| NF | — | — | — | — |
| NS | -2.91E+05 | 2.91E+05 | -2.90E+05 | 2.90E+05 |




Data identically zero, insufficient, or not available from NFA.

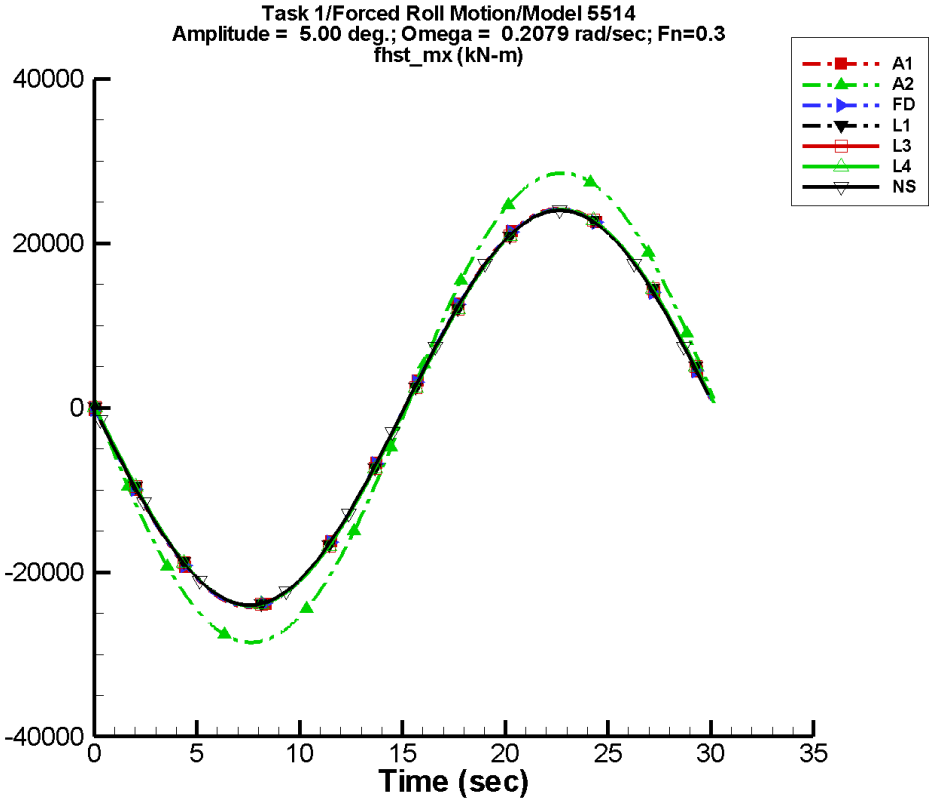
Figure D–315. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–629. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.308 | 3.15E+05 | 180 | 0.522 | 163 |
| A2 | -4.48E+03 | 2.53E+05 | 176 | 9.67E+03 | -170 |
| FD | -3.44E+03 | 2.57E+05 | -179 | 6.55E+03 | -29 |
| L1 | 815. | 3.53E+05 | 177 | 1.56E+03 | 26 |
| L3 | -2.66E+03 | 2.74E+05 | 179 | 5.29E+03 | -171 |
| L4 | -2.66E+03 | 2.74E+05 | 179 | 5.29E+03 | -171 |
| NF | — | — | — | — | — |
| NS | -643. | 4.22E+05 | 180 | 752. | 90 |

Table D–630. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.15E+05 | 3.15E+05 | -3.11E+05 | 3.11E+05 |
| A2 | -2.27E+05 | 2.27E+05 | -2.22E+05 | 2.22E+05 |
| FD | -2.31E+05 | 2.31E+05 | -2.27E+05 | 2.27E+05 |
| L1 | -3.67E+05 | 3.67E+05 | -3.65E+05 | 3.65E+05 |
| L3 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.38E+05 |
| L4 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.38E+05 |
| NF | — | — | — | — |
| NS | -4.30E+05 | 4.27E+05 | -4.30E+05 | 4.27E+05 |




Data identically zero, insufficient, or not available from NFA.

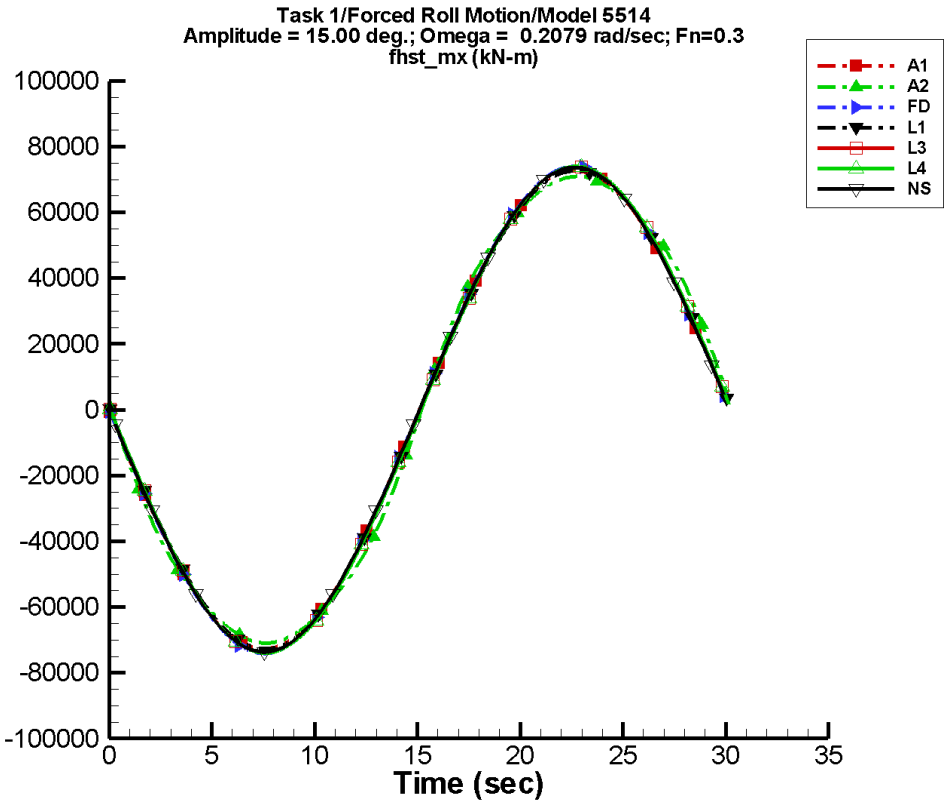
Figure D–316. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–631. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.99E-02 | 2.42E+04 | 180 | 2.44E-02 | 157 |
| A2 | -12.2 | 2.89E+04 | 179 | 62.0 | -119 |
| FD | 0.253 | 2.41E+04 | 180 | 1.14 | 54 |
| L1 | 0.426 | 2.40E+04 | 179 | 1.60 | 87 |
| L3 | 1.64 | 2.41E+04 | 179 | 6.12 | 86 |
| L4 | 1.64 | 2.41E+04 | 179 | 6.12 | 86 |
| NF | — | — | — | — | — |
| NS | -1.63E-03 | 2.40E+04 | -180 | 2.32E-03 | 175 |

Table D–632. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.42E+04 | 2.42E+04 | -2.42E+04 | 2.42E+04 |
| A2 | -2.85E+04 | 2.85E+04 | -2.85E+04 | 2.85E+04 |
| FD | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| L1 | -2.40E+04 | 2.40E+04 | -2.40E+04 | 2.40E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| L4 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| NF | — | — | — | — |
| NS | -2.40E+04 | 2.40E+04 | -2.38E+04 | 2.38E+04 |




Data identically zero, insufficient, or not available from NFA.

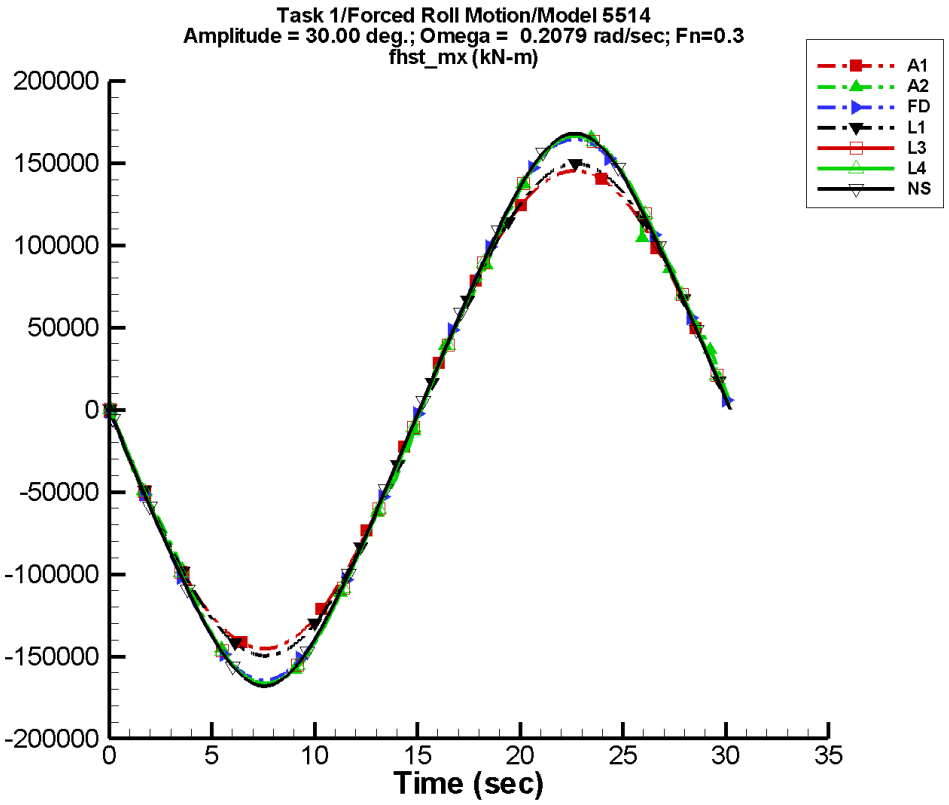
Figure D–317. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–633. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.54E-02 | 7.26E+04 | 180 | 7.25E-02 | 162 |
| A2 | -117. | 7.32E+04 | 179 | 587. | -116 |
| FD | 13.9 | 7.36E+04 | 180 | 70.6 | 56 |
| L1 | 10.9 | 7.25E+04 | 179 | 42.9 | 87 |
| L3 | 28.1 | 7.35E+04 | 179 | 110. | 87 |
| L4 | 28.1 | 7.35E+04 | 179 | 110. | 87 |
| NF | — | — | — | — | — |
| NS | -1.99E-03 | 7.32E+04 | -180 | 7.14E-03 | -127 |

Table D–634. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.26E+04 | 7.26E+04 | -7.27E+04 | 7.26E+04 |
| A2 | -7.09E+04 | 7.09E+04 | -7.09E+04 | 7.09E+04 |
| FD | -7.41E+04 | 7.41E+04 | -7.40E+04 | 7.40E+04 |
| L1 | -7.27E+04 | 7.27E+04 | -7.26E+04 | 7.26E+04 |
| L3 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| L4 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| NF | — | — | — | — |
| NS | -7.37E+04 | 7.37E+04 | -7.29E+04 | 7.29E+04 |




Data identically zero, insufficient, or not available from NFA.

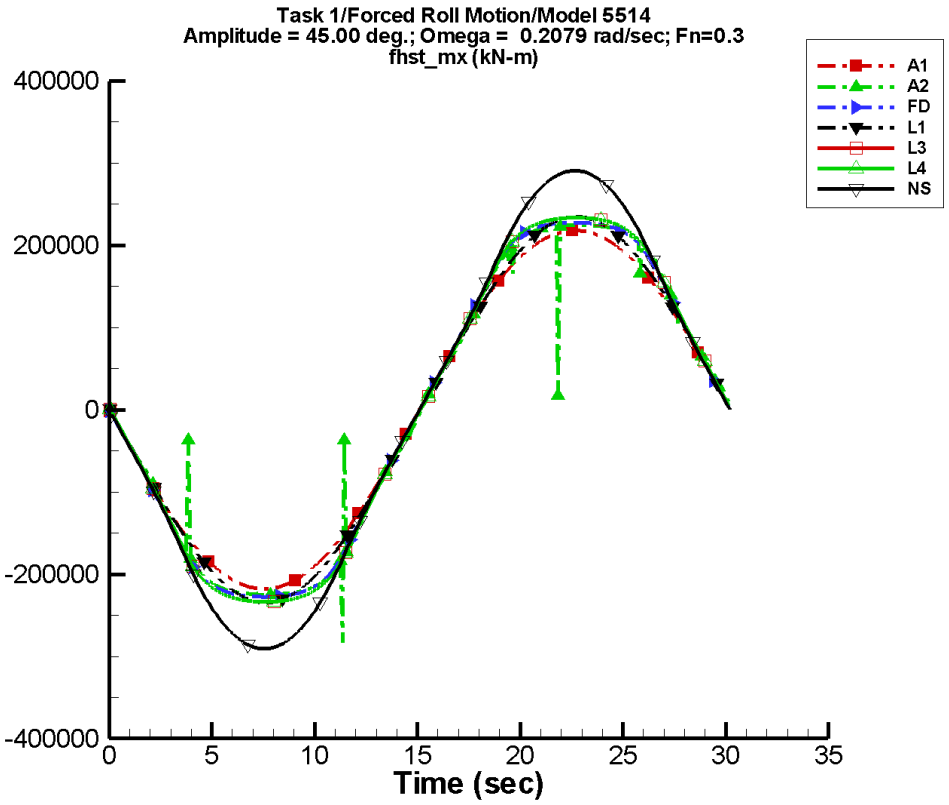
Figure D–318. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–635. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.110 | 1.45E+05 | 180 | 0.141 | 163 |
| A2 | 25.9 | 1.60E+05 | 179 | 1.03E+03 | 41 |
| FD | 156. | 1.59E+05 | 180 | 798. | 57 |
| L1 | 86.0 | 1.48E+05 | 179 | 339. | 87 |
| L3 | 365. | 1.60E+05 | 179 | 1.44E+03 | 87 |
| L4 | 365. | 1.60E+05 | 179 | 1.44E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 4.52E-04 | 1.60E+05 | -180 | 7.14E-03 | -133 |

Table D–636. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.45E+05 | 1.45E+05 | -1.45E+05 | 1.45E+05 |
| A2 | -1.67E+05 | 1.67E+05 | -1.67E+05 | 1.67E+05 |
| FD | -1.65E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| L1 | -1.50E+05 | 1.50E+05 | -1.50E+05 | 1.50E+05 |
| L3 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| L4 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| NF | — | — | — | — |
| NS | -1.68E+05 | 1.68E+05 | -1.67E+05 | 1.67E+05 |




Data identically zero, insufficient, or not available from NFA.

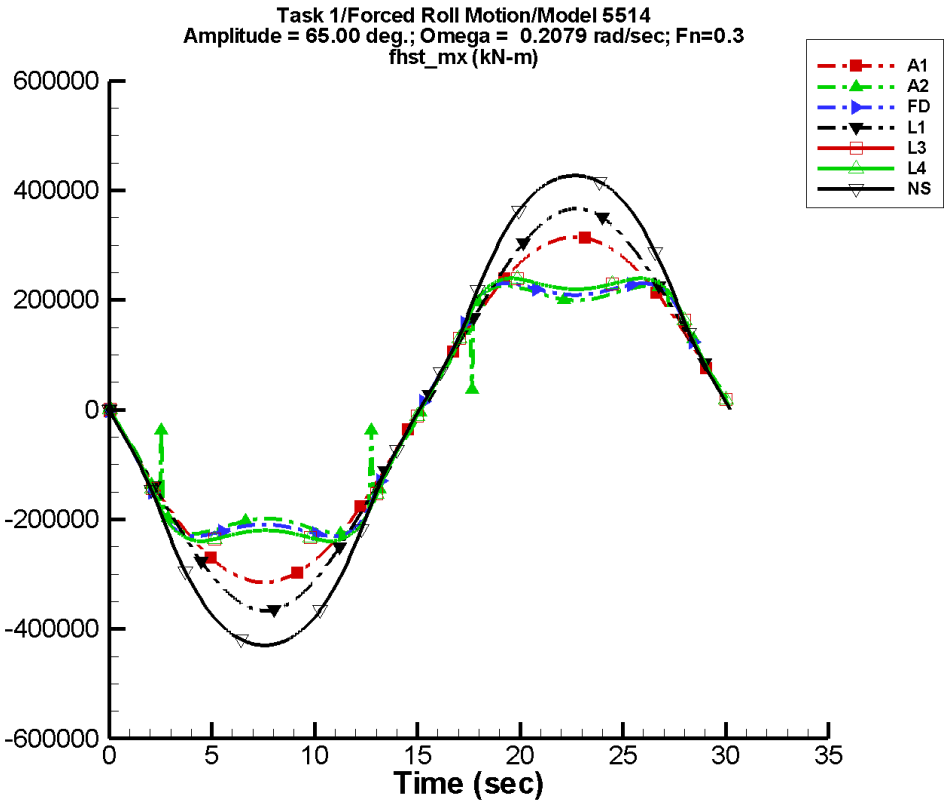
Figure D–319. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–637. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.189 | 2.18E+05 | 180 | 0.226 | 157 |
| A2 | -646. | 2.34E+05 | 179 | 1.46E+03 | 120 |
| FD | 34.7 | 2.38E+05 | 180 | 555. | 155 |
| L1 | 284. | 2.30E+05 | 179 | 1.12E+03 | 87 |
| L3 | 86.6 | 2.43E+05 | 179 | 180. | 66 |
| L4 | 86.6 | 2.43E+05 | 179 | 180. | 66 |
| NF | — | — | — | — | — |
| NS | -0.722 | 2.75E+05 | -180 | 1.18 | 91 |

Table D–638. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.18E+05 | -2.18E+05 | 2.18E+05 |
| A2 | -2.83E+05 | 2.25E+05 | -2.25E+05 | 2.27E+05 |
| FD | -2.27E+05 | 2.27E+05 | -2.28E+05 | 2.27E+05 |
| L1 | -2.35E+05 | 2.35E+05 | -2.35E+05 | 2.35E+05 |
| L3 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| L4 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| NF | — | — | — | — |
| NS | -2.91E+05 | 2.91E+05 | -2.90E+05 | 2.90E+05 |




Data identically zero, insufficient, or not available from NFA.

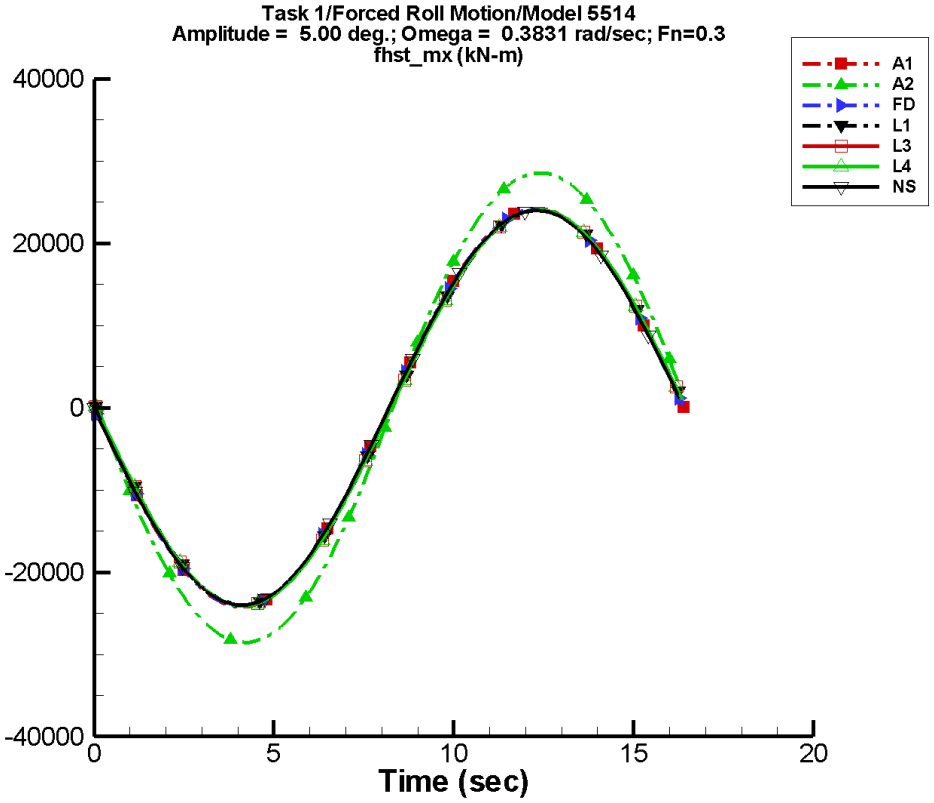
Figure D–320. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–639. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.262 | 3.15E+05 | 180 | 0.310 | 156 |
| A2 | -722. | 2.52E+05 | 180 | 7.77E+03 | -135 |
| FD | -1.13E+03 | 2.61E+05 | -179 | 6.68E+03 | -129 |
| L1 | 824. | 3.53E+05 | 179 | 3.24E+03 | 87 |
| L3 | -2.64E+03 | 2.71E+05 | 179 | 1.06E+04 | -92 |
| L4 | -2.64E+03 | 2.71E+05 | 179 | 1.06E+04 | -92 |
| NF | — | — | — | — | — |
| NS | -651. | 4.22E+05 | 180 | 769. | 90 |

Table D–640. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.15E+05 | 3.15E+05 | -3.15E+05 | 3.14E+05 |
| A2 | -2.27E+05 | 2.27E+05 | -2.26E+05 | 2.26E+05 |
| FD | -2.31E+05 | 2.31E+05 | -2.30E+05 | 2.30E+05 |
| L1 | -3.67E+05 | 3.67E+05 | -3.67E+05 | 3.67E+05 |
| L3 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.40E+05 |
| L4 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.40E+05 |
| NF | — | — | — | — |
| NS | -4.30E+05 | 4.27E+05 | -4.30E+05 | 4.27E+05 |




Data identically zero, insufficient, or not available from NFA.

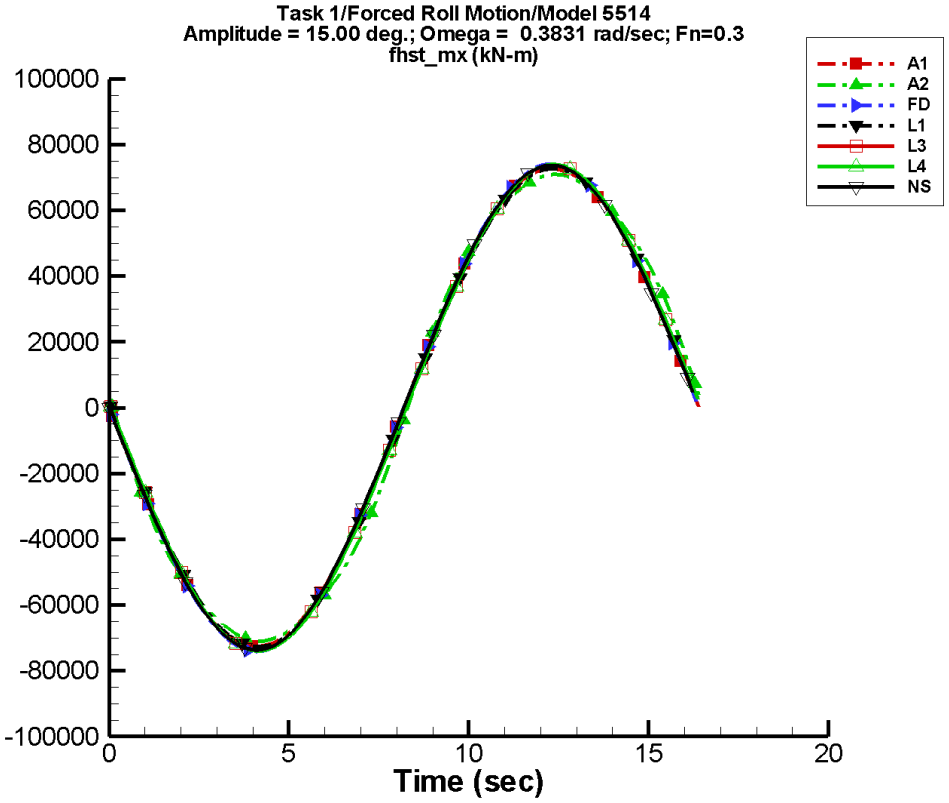
Figure D–321. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–641. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.36E-03 | 2.42E+04 | -180 | 1.26E-03 | 145 |
| A2 | -11.2 | 2.89E+04 | 178 | 64.1 | -120 |
| FD | 0.293 | 2.41E+04 | 180 | 1.60 | 81 |
| L1 | 0.247 | 2.40E+04 | 179 | 0.747 | 28 |
| L3 | 1.54 | 2.41E+04 | 179 | 3.11 | 42 |
| L4 | 1.54 | 2.41E+04 | 179 | 3.11 | 42 |
| NF | — | — | — | — | — |
| NS | -4.64E-04 | 2.40E+04 | 180 | 3.73E-03 | 176 |

Table D–642. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.42E+04 | 2.42E+04 | -2.43E+04 | 2.41E+04 |
| A2 | -2.85E+04 | 2.85E+04 | -2.86E+04 | 2.84E+04 |
| FD | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.40E+04 |
| L1 | -2.40E+04 | 2.40E+04 | -2.40E+04 | 2.40E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| L4 | -2.41E+04 | 2.41E+04 | -2.41E+04 | 2.41E+04 |
| NF | — | — | — | — |
| NS | -2.40E+04 | 2.40E+04 | -2.38E+04 | 2.38E+04 |




Data identically zero, insufficient, or not available from NFA.

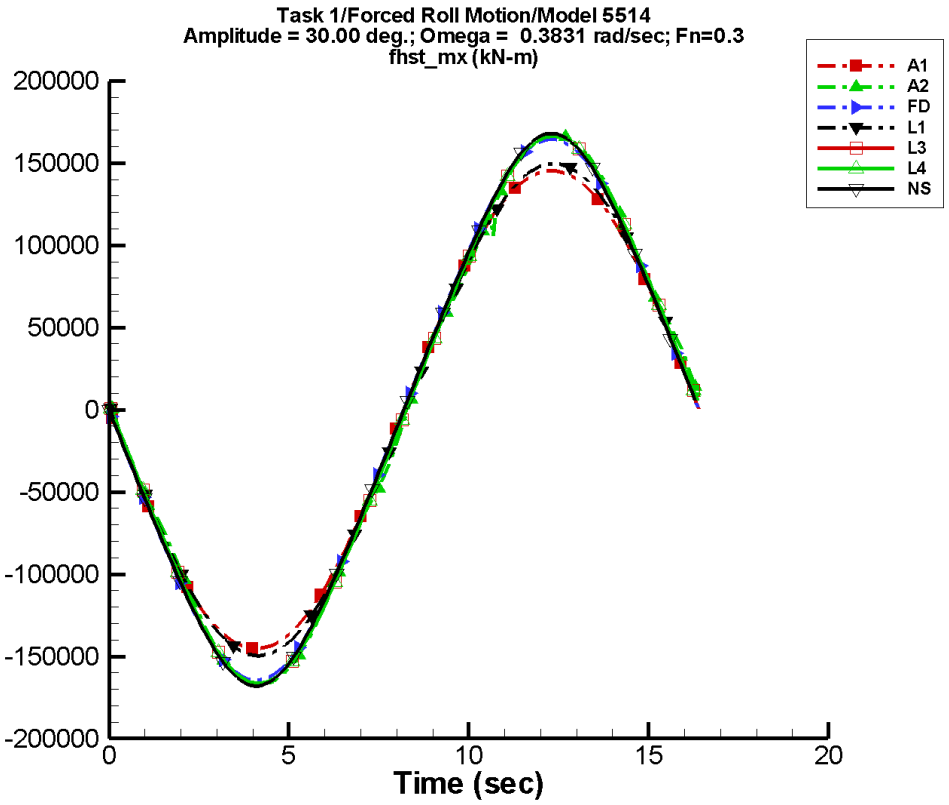
Figure D–322. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–643. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.24E-03 | 7.26E+04 | -180 | 9.49E-03 | -42 |
| A2 | -110. | 7.31E+04 | 178 | 601. | -118 |
| FD | 14.5 | 7.36E+04 | 180 | 96.9 | 76 |
| L1 | 9.88 | 7.25E+04 | 179 | 20.1 | 28 |
| L3 | 26.6 | 7.35E+04 | 179 | 51.6 | 31 |
| L4 | 26.6 | 7.35E+04 | 179 | 51.6 | 31 |
| NF | — | — | — | — | — |
| NS | 5.78E-03 | 7.32E+04 | 180 | 8.83E-03 | 167 |

Table D–644. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.26E+04 | 7.26E+04 | -7.28E+04 | 7.24E+04 |
| A2 | -7.09E+04 | 7.09E+04 | -7.10E+04 | 7.07E+04 |
| FD | -7.41E+04 | 7.41E+04 | -7.38E+04 | 7.38E+04 |
| L1 | -7.27E+04 | 7.27E+04 | -7.26E+04 | 7.26E+04 |
| L3 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| L4 | -7.40E+04 | 7.40E+04 | -7.39E+04 | 7.39E+04 |
| NF | — | — | — | — |
| NS | -7.37E+04 | 7.37E+04 | -7.29E+04 | 7.29E+04 |




Data identically zero, insufficient, or not available from NFA.

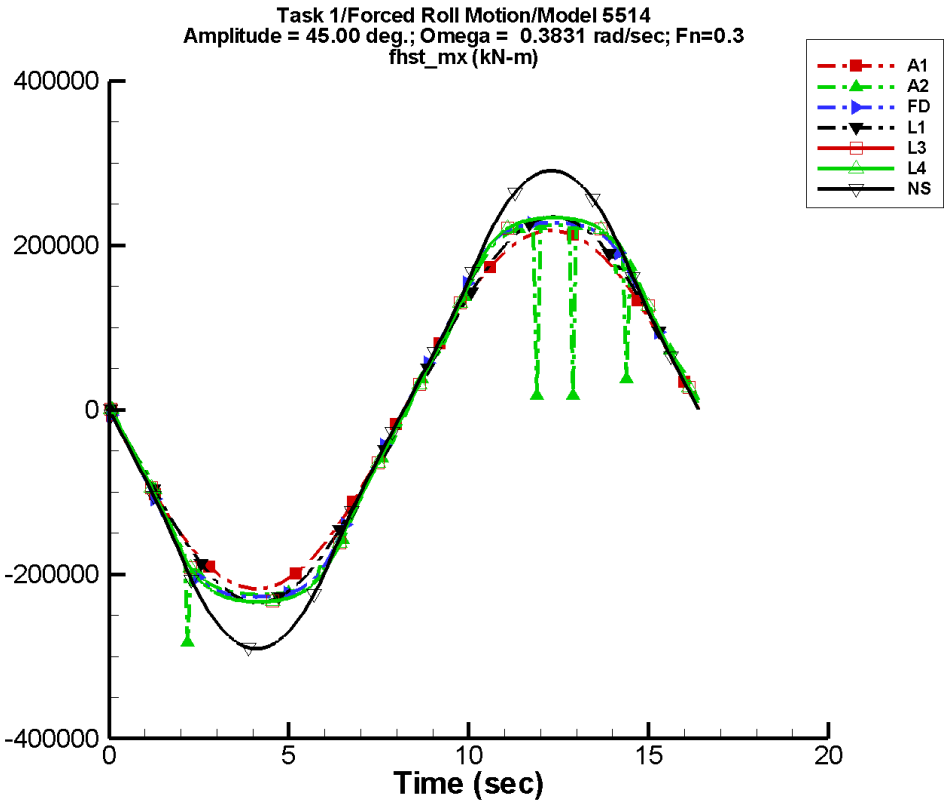
Figure D–323. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–645. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.30E-02 | 1.45E+05 | -180 | 1.36E-02 | -91 |
| A2 | -41.7 | 1.60E+05 | 178 | 896. | 56 |
| FD | 158. | 1.59E+05 | 180 | 1.08E+03 | 76 |
| L1 | 82.2 | 1.48E+05 | 179 | 159. | 28 |
| L3 | 352. | 1.60E+05 | 178 | 675. | 26 |
| L4 | 352. | 1.60E+05 | 178 | 675. | 26 |
| NF | — | — | — | — | — |
| NS | -1.08E-03 | 1.60E+05 | 180 | 4.25E-03 | 1 |

Table D–646. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.45E+05 | 1.45E+05 | -1.46E+05 | 1.45E+05 |
| A2 | -1.67E+05 | 1.67E+05 | -1.67E+05 | 1.66E+05 |
| FD | -1.64E+05 | 1.64E+05 | -1.64E+05 | 1.64E+05 |
| L1 | -1.50E+05 | 1.50E+05 | -1.49E+05 | 1.49E+05 |
| L3 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| L4 | -1.66E+05 | 1.66E+05 | -1.66E+05 | 1.66E+05 |
| NF | — | — | — | — |
| NS | -1.68E+05 | 1.68E+05 | -1.67E+05 | 1.67E+05 |




Data identically zero, insufficient, or not available from NFA.

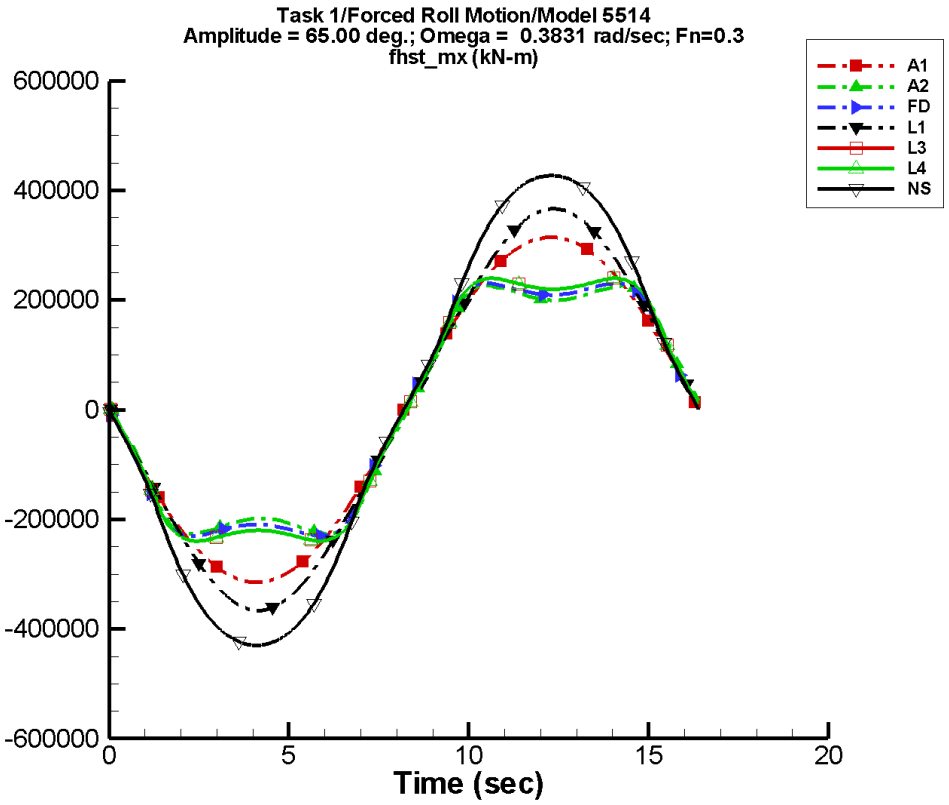
Figure D–324. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–647. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.91E-02 | 2.18E+05 | -180 | 3.03E-03 | -9 |
| A2 | -3.89E+03 | 2.30E+05 | 178 | 4.54E+03 | 81 |
| FD | -125. | 2.38E+05 | 180 | 461. | -68 |
| L1 | 276. | 2.30E+05 | 179 | 526. | 29 |
| L3 | 185. | 2.43E+05 | 179 | 511. | 74 |
| L4 | 185. | 2.43E+05 | 179 | 511. | 74 |
| NF | — | — | — | — | — |
| NS | 0.993 | 2.75E+05 | -180 | 1.57 | -90 |

Table D–648. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.18E+05 | -2.19E+05 | 2.17E+05 |
| A2 | -2.83E+05 | 2.25E+05 | -2.26E+05 | 2.15E+05 |
| FD | -2.27E+05 | 2.27E+05 | -2.27E+05 | 2.27E+05 |
| L1 | -2.35E+05 | 2.35E+05 | -2.34E+05 | 2.34E+05 |
| L3 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| L4 | -2.34E+05 | 2.34E+05 | -2.34E+05 | 2.34E+05 |
| NF | — | — | — | — |
| NS | -2.91E+05 | 2.91E+05 | -2.90E+05 | 2.90E+05 |




Data identically zero, insufficient, or not available from NFA.

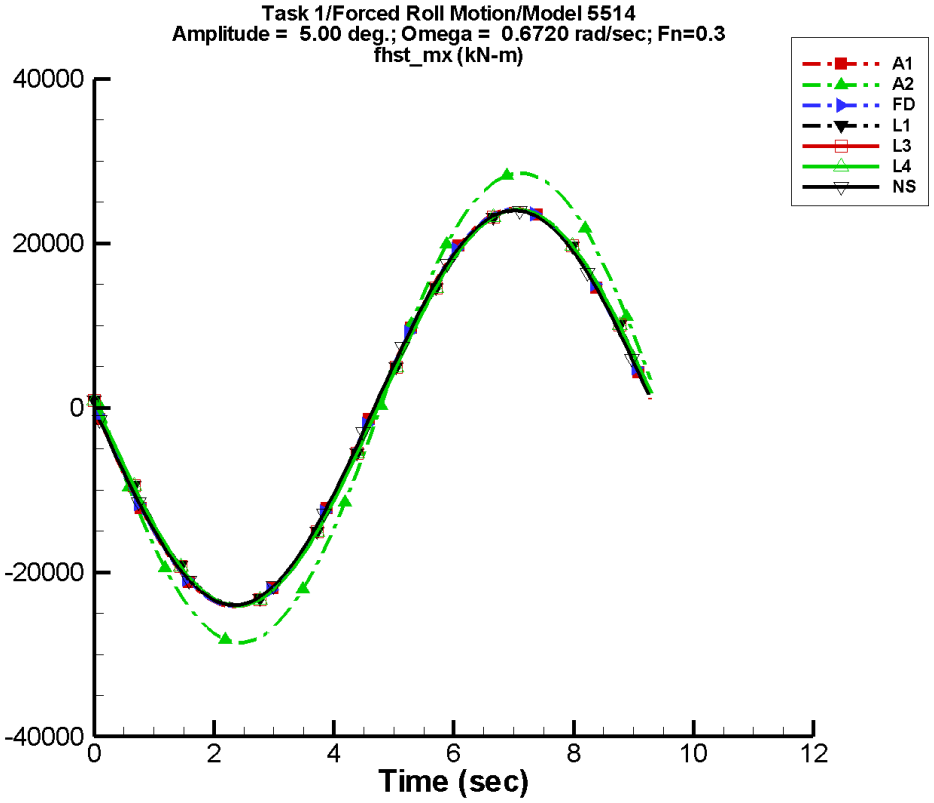
Figure D–325. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–649. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.96E-02 | 3.15E+05 | -180 | 3.08E-03 | 174 |
| A2 | -740. | 2.53E+05 | 179 | 7.95E+03 | -129 |
| FD | -1.28E+03 | 2.60E+05 | -179 | 9.34E+03 | -104 |
| L1 | 801. | 3.53E+05 | 178 | 1.53E+03 | 29 |
| L3 | -2.44E+03 | 2.74E+05 | 180 | 4.88E+03 | -165 |
| L4 | -2.44E+03 | 2.74E+05 | 180 | 4.88E+03 | -165 |
| NF | — | — | — | — | — |
| NS | -657. | 4.22E+05 | 180 | 776. | 90 |

Table D–650. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.15E+05 | 3.15E+05 | -3.16E+05 | 3.14E+05 |
| A2 | -2.27E+05 | 2.27E+05 | -2.24E+05 | 2.24E+05 |
| FD | -2.31E+05 | 2.31E+05 | -2.29E+05 | 2.29E+05 |
| L1 | -3.67E+05 | 3.67E+05 | -3.66E+05 | 3.66E+05 |
| L3 | -2.40E+05 | 2.40E+05 | -2.39E+05 | 2.39E+05 |
| L4 | -2.40E+05 | 2.40E+05 | -2.39E+05 | 2.39E+05 |
| NF | — | — | — | — |
| NS | -4.30E+05 | 4.27E+05 | -4.30E+05 | 4.27E+05 |




Data identically zero, insufficient, or not available from NFA.

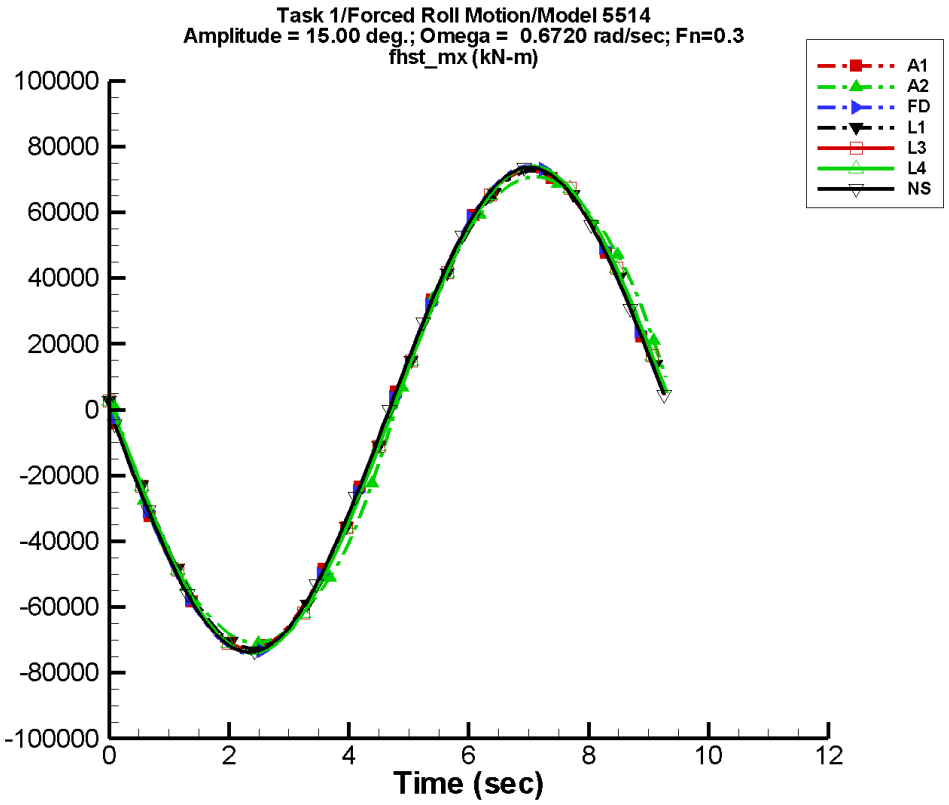
Figure D–326. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–651. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.47E-02 | 2.42E+04 | 180 | 4.27E-02 | 162 |
| A2 | -20.7 | 2.89E+04 | 176 | 47.0 | -140 |
| FD | 0.690 | 2.41E+04 | 180 | 1.13 | 148 |
| L1 | -3.69E-02 | 2.40E+04 | 178 | 0.777 | 23 |
| L3 | 1.16 | 2.41E+04 | 178 | 3.09 | 42 |
| L4 | 1.16 | 2.41E+04 | 178 | 3.09 | 42 |
| NF | — | — | — | — | — |
| NS | 1.73E-03 | 2.40E+04 | -180 | 1.97E-03 | -128 |

Table D–652. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.42E+04 | 2.42E+04 | -2.39E+04 | 2.39E+04 |
| A2 | -2.85E+04 | 2.85E+04 | -2.82E+04 | 2.82E+04 |
| FD | -2.41E+04 | 2.41E+04 | -2.39E+04 | 2.40E+04 |
| L1 | -2.40E+04 | 2.40E+04 | -2.39E+04 | 2.39E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.40E+04 |
| L4 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.40E+04 |
| NF | — | — | — | — |
| NS | -2.40E+04 | 2.40E+04 | -2.38E+04 | 2.38E+04 |




Data identically zero, insufficient, or not available from NFA.

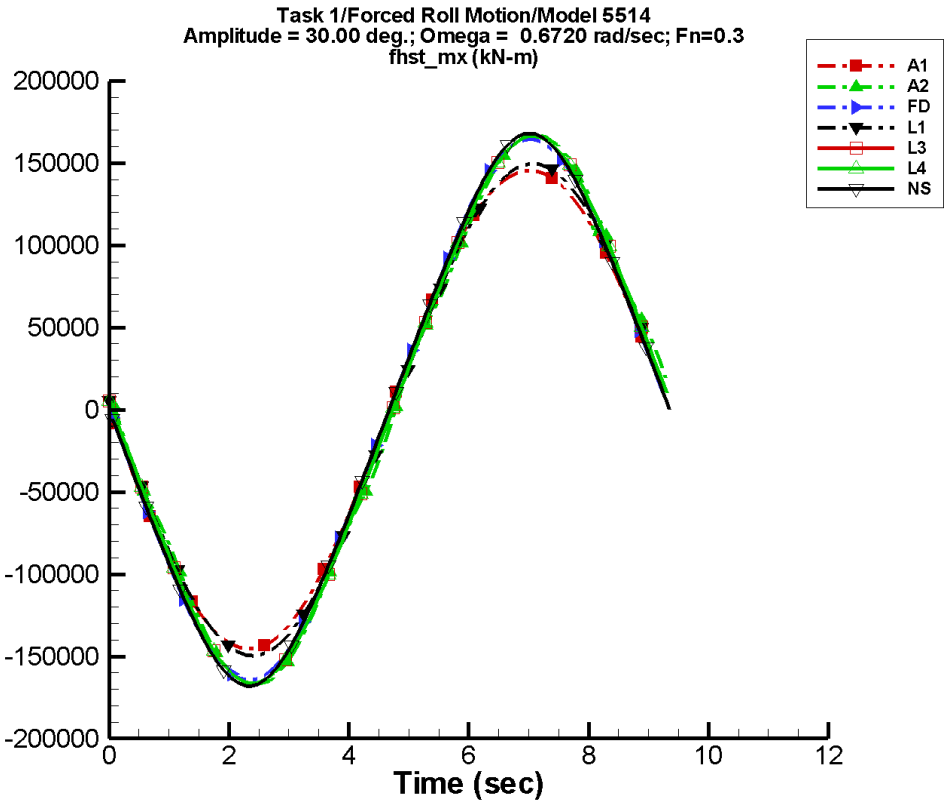
Figure D–327. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–653. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.91E-02 | 7.26E+04 | 180 | 0.125 | 164 |
| A2 | -183. | 7.33E+04 | 176 | 462. | -133 |
| FD | 37.1 | 7.36E+04 | 180 | 68.6 | 148 |
| L1 | 9.48 | 7.25E+04 | 178 | 20.7 | 25 |
| L3 | 26.6 | 7.35E+04 | 178 | 52.8 | 27 |
| L4 | 26.6 | 7.35E+04 | 178 | 52.8 | 27 |
| NF | — | — | — | — | — |
| NS | 5.54E-03 | 7.32E+04 | 180 | 1.03E-02 | -140 |

Table D–654. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.26E+04 | 7.26E+04 | -7.18E+04 | 7.18E+04 |
| A2 | -7.09E+04 | 7.09E+04 | -7.01E+04 | 7.01E+04 |
| FD | -7.41E+04 | 7.41E+04 | -7.32E+04 | 7.37E+04 |
| L1 | -7.27E+04 | 7.27E+04 | -7.24E+04 | 7.23E+04 |
| L3 | -7.40E+04 | 7.39E+04 | -7.36E+04 | 7.36E+04 |
| L4 | -7.40E+04 | 7.39E+04 | -7.36E+04 | 7.36E+04 |
| NF | — | — | — | — |
| NS | -7.37E+04 | 7.37E+04 | -7.29E+04 | 7.29E+04 |




Data identically zero, insufficient, or not available from NFA.

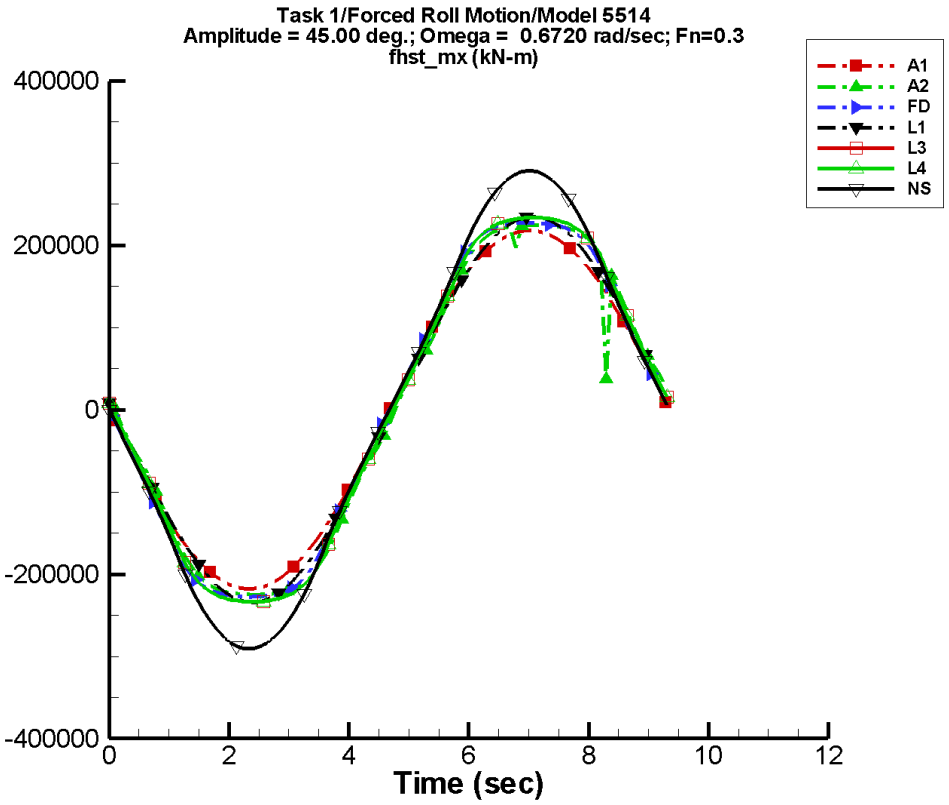
Figure D–328. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–655. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.138 | 1.45E+05 | 180 | 0.256 | 161 |
| A2 | 76.7 | 1.59E+05 | 176 | 1.13E+03 | 10 |
| FD | 406. | 1.60E+05 | 180 | 766. | 146 |
| L1 | 83.1 | 1.48E+05 | 178 | 163. | 25 |
| L3 | 362. | 1.60E+05 | 177 | 696. | 22 |
| L4 | 362. | 1.60E+05 | 177 | 696. | 22 |
| NF | — | — | — | — | — |
| NS | -2.46E-02 | 1.60E+05 | 180 | 6.33E-02 | -169 |

Table D–656. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.45E+05 | 1.45E+05 | -1.44E+05 | 1.44E+05 |
| A2 | -1.67E+05 | 1.67E+05 | -1.65E+05 | 1.65E+05 |
| FD | -1.64E+05 | 1.64E+05 | -1.62E+05 | 1.63E+05 |
| L1 | -1.50E+05 | 1.50E+05 | -1.49E+05 | 1.49E+05 |
| L3 | -1.66E+05 | 1.66E+05 | -1.65E+05 | 1.65E+05 |
| L4 | -1.66E+05 | 1.66E+05 | -1.65E+05 | 1.65E+05 |
| NF | — | — | — | — |
| NS | -1.68E+05 | 1.68E+05 | -1.67E+05 | 1.67E+05 |




Data identically zero, insufficient, or not available from NFA.

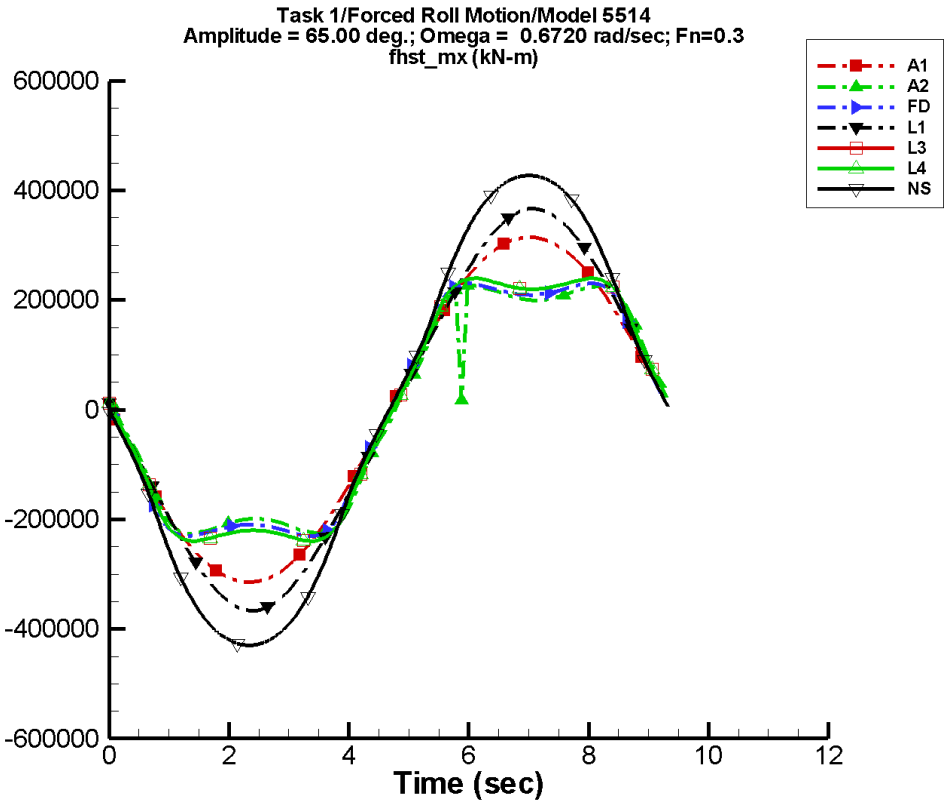
Figure D–329. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–657. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.227 | 2.18E+05 | 180 | 0.368 | 163 |
| A2 | -2.05E+03 | 2.35E+05 | 177 | 2.34E+03 | 28 |
| FD | -229. | 2.38E+05 | -180 | 651. | 33 |
| L1 | 280. | 2.30E+05 | 178 | 540. | 25 |
| L3 | -42.8 | 2.43E+05 | 178 | 838. | 109 |
| L4 | -42.8 | 2.43E+05 | 178 | 838. | 109 |
| NF | — | — | — | — | — |
| NS | -0.385 | 2.75E+05 | -180 | 0.594 | 85 |

Table D–658. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.18E+05 | -2.15E+05 | 2.15E+05 |
| A2 | -2.25E+05 | 2.25E+05 | -2.24E+05 | 2.24E+05 |
| FD | -2.27E+05 | 2.27E+05 | -2.27E+05 | 2.28E+05 |
| L1 | -2.35E+05 | 2.35E+05 | -2.34E+05 | 2.34E+05 |
| L3 | -2.34E+05 | 2.34E+05 | -2.33E+05 | 2.33E+05 |
| L4 | -2.34E+05 | 2.34E+05 | -2.33E+05 | 2.33E+05 |
| NF | — | — | — | — |
| NS | -2.91E+05 | 2.91E+05 | -2.90E+05 | 2.90E+05 |




Data identically zero, insufficient, or not available from NFA.

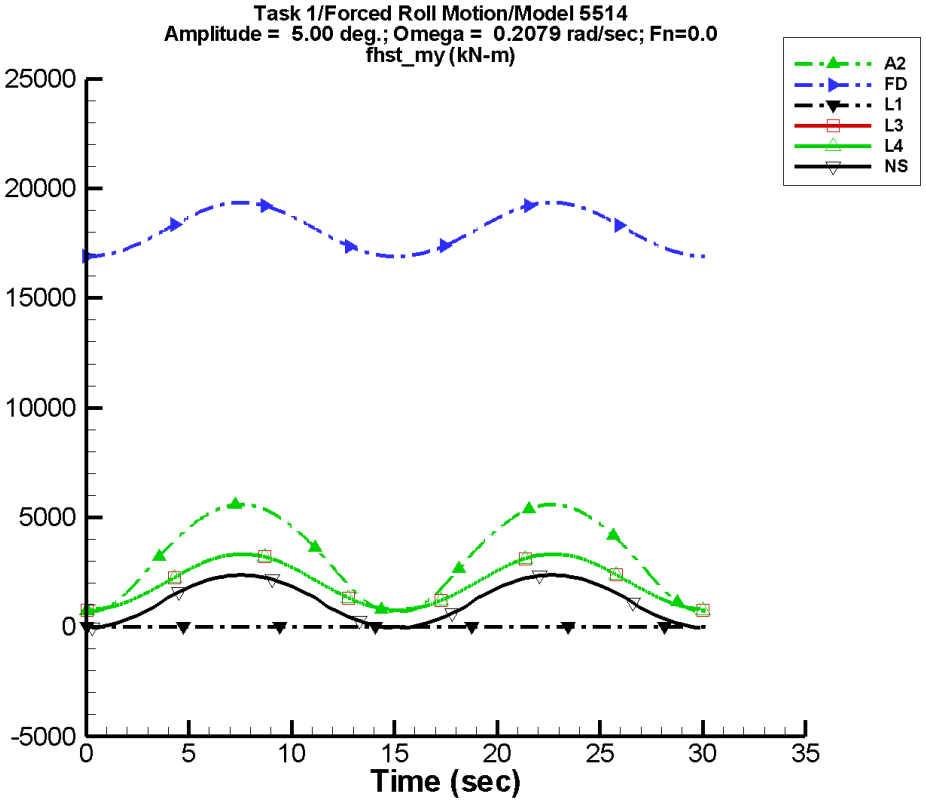
Figure D–330. Time history of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–659. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.308 | 3.15E+05 | 180 | 0.522 | 163 |
| A2 | -4.48E+03 | 2.53E+05 | 176 | 9.67E+03 | -170 |
| FD | -3.44E+03 | 2.57E+05 | -179 | 6.55E+03 | -29 |
| L1 | 815. | 3.53E+05 | 177 | 1.56E+03 | 26 |
| L3 | -2.66E+03 | 2.74E+05 | 179 | 5.29E+03 | -171 |
| L4 | -2.66E+03 | 2.74E+05 | 179 | 5.29E+03 | -171 |
| NF | — | — | — | — | — |
| NS | -643. | 4.22E+05 | 180 | 752. | 90 |

Table D–660. Minimum and maximum of of $M_x^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.15E+05 | 3.15E+05 | -3.11E+05 | 3.11E+05 |
| A2 | -2.27E+05 | 2.27E+05 | -2.22E+05 | 2.22E+05 |
| FD | -2.31E+05 | 2.31E+05 | -2.27E+05 | 2.27E+05 |
| L1 | -3.67E+05 | 3.67E+05 | -3.65E+05 | 3.65E+05 |
| L3 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.38E+05 |
| L4 | -2.40E+05 | 2.40E+05 | -2.40E+05 | 2.38E+05 |
| NF | — | — | — | — |
| NS | -4.30E+05 | 4.27E+05 | -4.30E+05 | 4.27E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

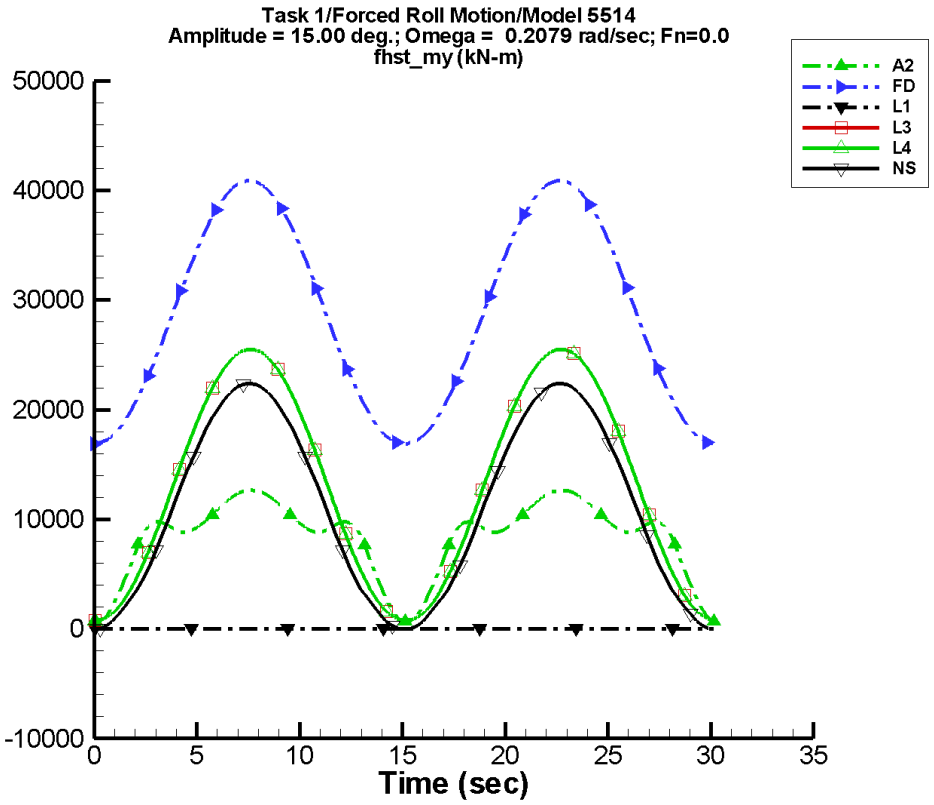
Figure D–331. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–661. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.26E+03 | 1.82 | 22 | 2.47E+03 | -90 |
| FD | 1.81E+04 | 0.735 | -176 | 1.24E+03 | -90 |
| L1 | -2.69E-07 | 4.72E-03 | 179 | 1.08E-06 | -93 |
| L3 | 2.03E+03 | 1.85 | 118 | 1.28E+03 | -91 |
| L4 | 2.03E+03 | 1.85 | 118 | 1.28E+03 | -91 |
| NF | — | — | — | — | — |
| NS | 1.18E+03 | 1.09E-02 | -77 | 1.23E+03 | -90 |

Table D–662. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 5.59E+03 | 711. | 5.58E+03 |
| FD | 1.69E+04 | 1.94E+04 | 1.69E+04 | 1.94E+04 |
| L1 | -4.71E-03 | 4.71E-03 | -4.71E-03 | 4.71E-03 |
| L3 | 756. | 3.32E+03 | 758. | 3.32E+03 |
| L4 | 756. | 3.32E+03 | 758. | 3.32E+03 |
| NF | — | — | — | — |
| NS | -25.9 | 2.36E+03 | 5.85 | 2.32E+03 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

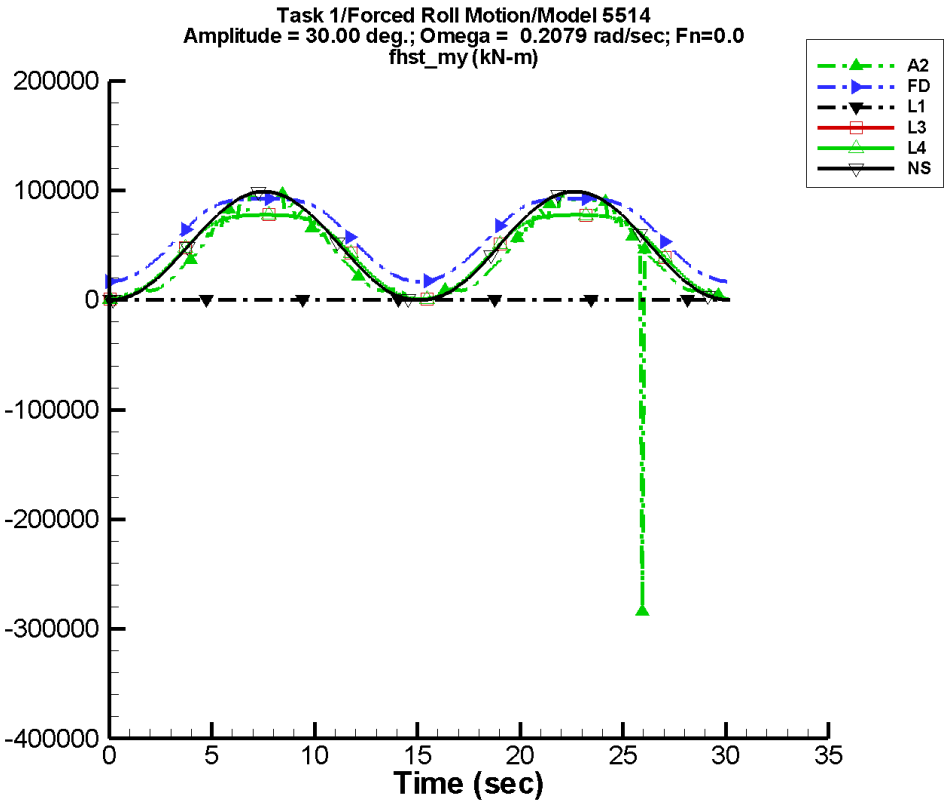
Figure D–332. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–663. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 8.28E+03 | 33.0 | -45 | 4.25E+03 | -91 |
| FD | 2.87E+04 | 3.65 | -177 | 1.21E+04 | -90 |
| L1 | -7.33E-06 | 1.38E-02 | 179 | 2.89E-05 | -93 |
| L3 | 1.30E+04 | 7.61 | 118 | 1.24E+04 | -91 |
| L4 | 1.30E+04 | 7.61 | 118 | 1.24E+04 | -91 |
| NF | — | — | — | — | — |
| NS | 1.10E+04 | 9.48E-03 | 123 | 1.12E+04 | -90 |

Table D–664. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 1.27E+04 | 706. | 1.26E+04 |
| FD | 1.69E+04 | 4.09E+04 | 1.69E+04 | 4.08E+04 |
| L1 | -1.37E-02 | 1.37E-02 | -1.37E-02 | 1.37E-02 |
| L3 | 758. | 2.55E+04 | 780. | 2.55E+04 |
| L4 | 758. | 2.55E+04 | 780. | 2.55E+04 |
| NF | — | — | — | — |
| NS | -0.124 | 2.24E+04 | 211. | 2.19E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

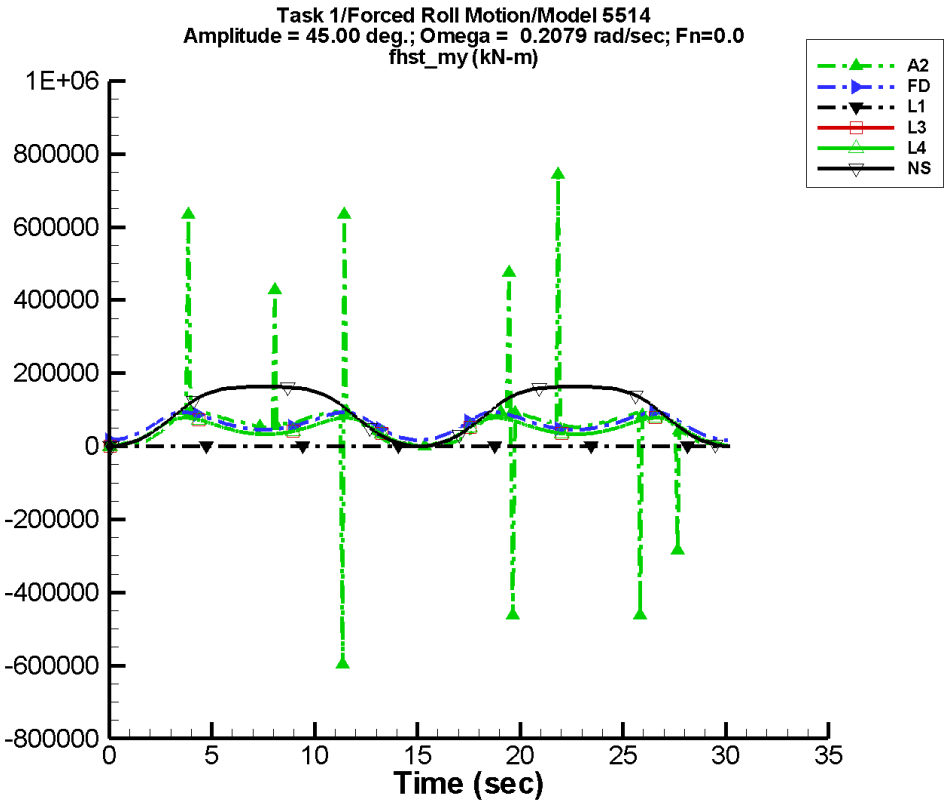
Figure D–333. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–665. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 4.11E+04 | 2.02E+03 | -44 | 4.51E+04 | -90 |
| FD | 6.01E+04 | 141. | 12 | 4.00E+04 | -89 |
| L1 | -5.74E-05 | 2.55E-02 | 179 | 2.26E-04 | -93 |
| L3 | 4.48E+04 | 331. | -58 | 4.00E+04 | -91 |
| L4 | 4.48E+04 | 331. | -58 | 4.00E+04 | -91 |
| NF | — | — | — | — | — |
| NS | 4.85E+04 | 8.84E-03 | 113 | 5.00E+04 | -90 |

Table D–666. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.84E+05 | 9.66E+04 | 612. | 9.33E+04 |
| FD | 1.69E+04 | 9.27E+04 | 1.68E+04 | 9.28E+04 |
| L1 | -2.46E-02 | 2.46E-02 | -2.46E-02 | 2.46E-02 |
| L3 | 763. | 7.77E+04 | 819. | 7.77E+04 |
| L4 | 763. | 7.77E+04 | 819. | 7.77E+04 |
| NF | — | — | — | — |
| NS | -0.377 | 9.89E+04 | 293. | 9.82E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

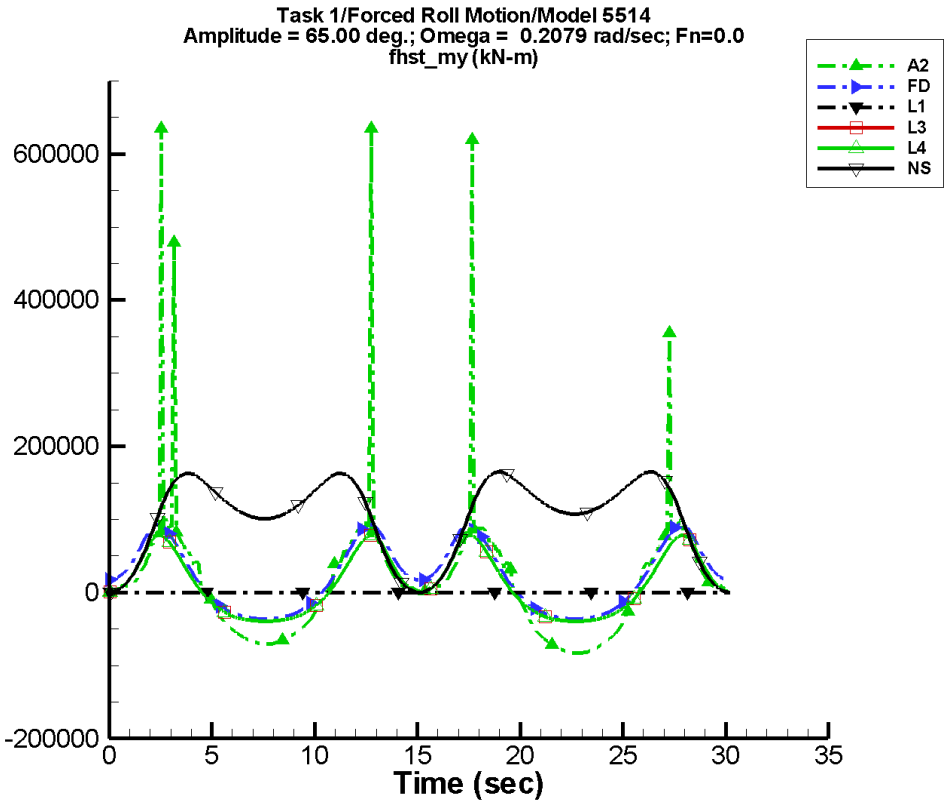
Figure D–334. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–667. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 5.33E+04 | 4.03E+03 | -38 | 3.73E+04 | -76 |
| FD | 5.86E+04 | 632. | 5 | 1.23E+04 | -78 |
| L1 | -1.87E-04 | 3.31E-02 | 179 | 7.38E-04 | -93 |
| L3 | 4.52E+04 | 2.34E+03 | -61 | 1.10E+04 | -92 |
| L4 | 4.52E+04 | 2.34E+03 | -61 | 1.10E+04 | -92 |
| NF | — | — | — | — | — |
| NS | 9.49E+04 | 0.901 | 8 | 8.56E+04 | -90 |

Table D–668. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -5.97E+05 | 7.43E+05 | 731. | 1.64E+05 |
| FD | 1.69E+04 | 9.30E+04 | 1.71E+04 | 9.22E+04 |
| L1 | -3.01E-02 | 3.01E-02 | -3.01E-02 | 3.01E-02 |
| L3 | 758. | 7.81E+04 | 903. | 7.78E+04 |
| L4 | 758. | 7.81E+04 | 903. | 7.78E+04 |
| NF | — | — | — | — |
| NS | -0.522 | 1.63E+05 | 291. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

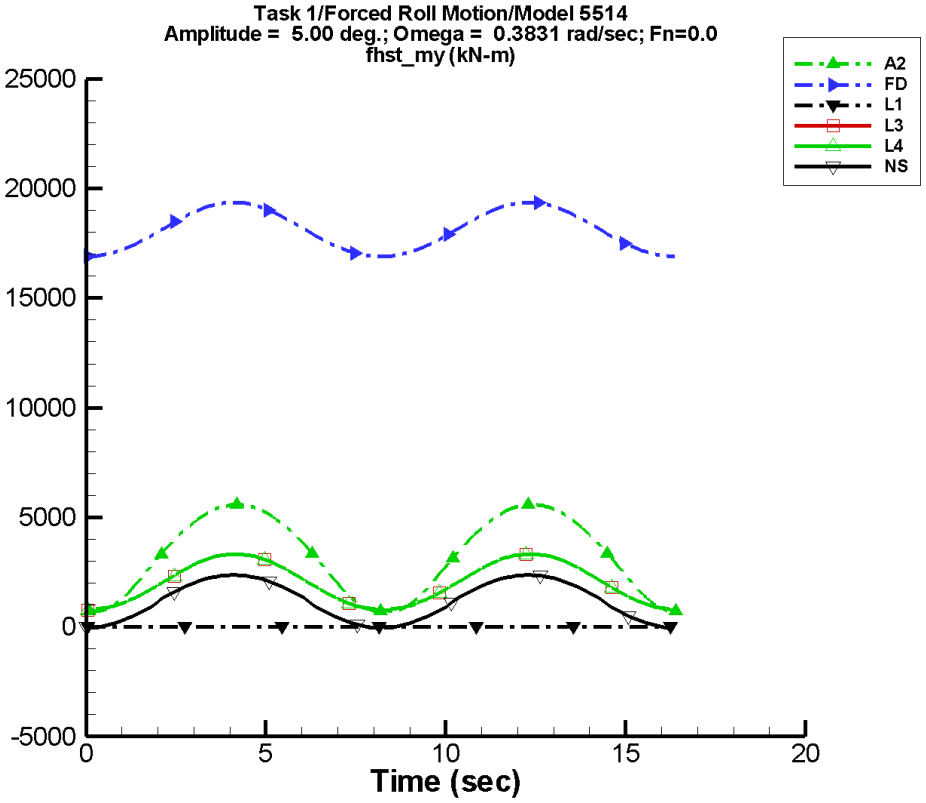
Figure D–335. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–669. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 1.17E+04 | 5.88E+03 | -24 | 6.16E+04 | 83 |
| FD | 2.14E+04 | 540. | -12 | 4.84E+04 | 87 |
| L1 | -5.28E-04 | 3.44E-02 | 180 | 2.08E-03 | -93 |
| L3 | 1.22E+04 | 2.96E+03 | -64 | 4.48E+04 | 88 |
| L4 | 1.22E+04 | 2.96E+03 | -64 | 4.48E+04 | 88 |
| NF | — | — | — | — | — |
| NS | 1.03E+05 | 2.29E+03 | 180 | 4.68E+04 | -90 |

Table D–670. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.33E+04 | 6.35E+05 | -8.28E+04 | 1.77E+05 |
| FD | -3.63E+04 | 9.30E+04 | -3.62E+04 | 9.05E+04 |
| L1 | -3.04E-02 | 3.04E-02 | -3.04E-02 | 3.04E-02 |
| L3 | -3.94E+04 | 7.81E+04 | -3.93E+04 | 7.72E+04 |
| L4 | -3.94E+04 | 7.81E+04 | -3.93E+04 | 7.72E+04 |
| NF | — | — | — | — |
| NS | -18.2 | 1.65E+05 | 288. | 1.64E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

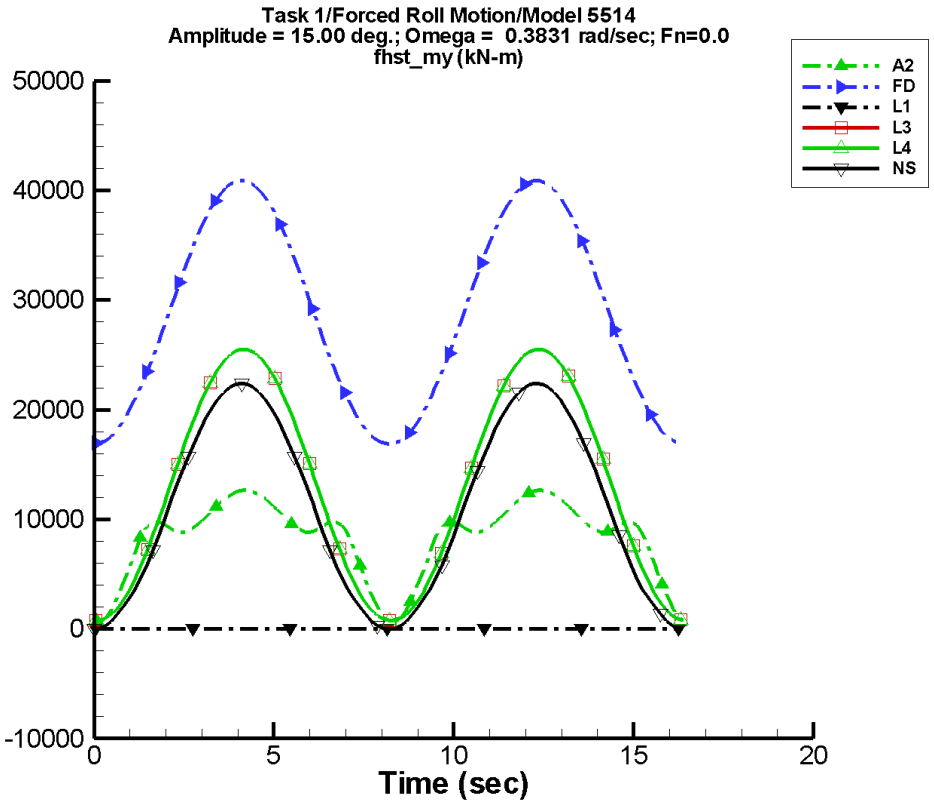
Figure D–336. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–671. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.26E+03 | 1.40 | 13 | 2.47E+03 | -94 |
| FD | 1.81E+04 | 1.35 | 121 | 1.24E+03 | -90 |
| L1 | -2.93E-07 | 4.72E-03 | 179 | 5.05E-07 | -152 |
| L3 | 2.03E+03 | 1.12 | 178 | 1.28E+03 | -93 |
| L4 | 2.03E+03 | 1.12 | 178 | 1.28E+03 | -93 |
| NF | — | — | — | — | — |
| NS | 1.18E+03 | 8.23E-03 | -11 | 1.23E+03 | -90 |

Table D–672. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 5.59E+03 | 703. | 5.58E+03 |
| FD | 1.69E+04 | 1.94E+04 | 1.69E+04 | 1.93E+04 |
| L1 | -4.71E-03 | 4.71E-03 | -4.71E-03 | 4.71E-03 |
| L3 | 756. | 3.32E+03 | 764. | 3.31E+03 |
| L4 | 756. | 3.32E+03 | 764. | 3.31E+03 |
| NF | — | — | — | — |
| NS | -25.9 | 2.36E+03 | 5.86 | 2.32E+03 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

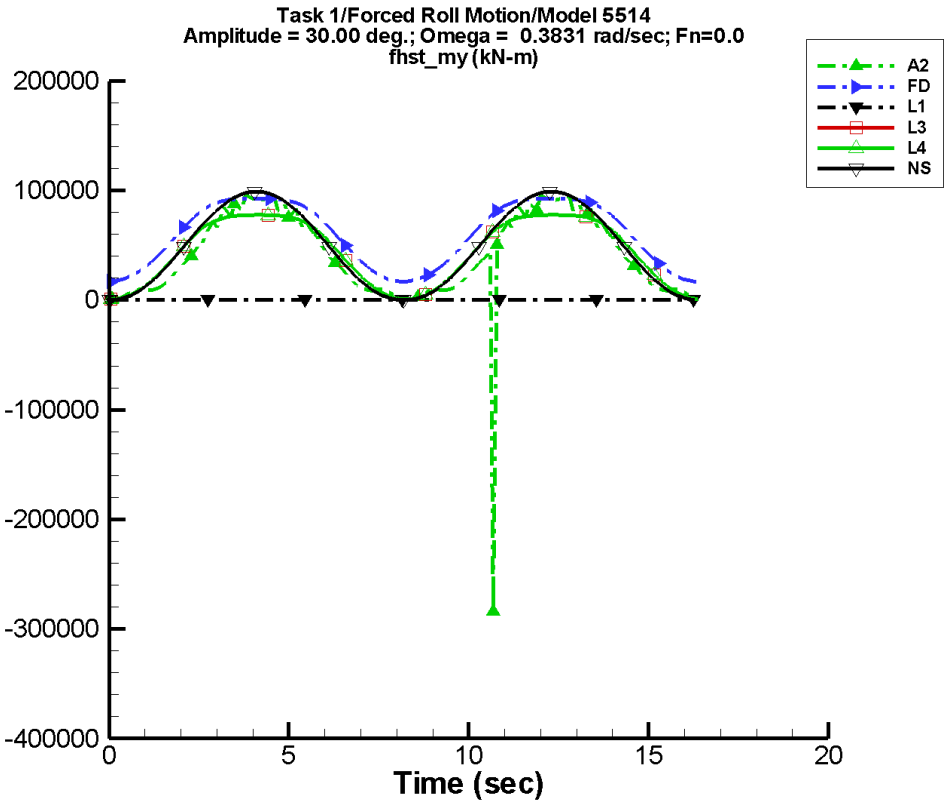
Figure D–337. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–673. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 8.28E+03 | 34.9 | -48 | 4.25E+03 | -93 |
| FD | 2.87E+04 | 8.20 | 120 | 1.21E+04 | -90 |
| L1 | -7.24E-06 | 1.38E-02 | 179 | 1.35E-05 | -152 |
| L3 | 1.30E+04 | 5.53 | 165 | 1.24E+04 | -93 |
| L4 | 1.30E+04 | 5.53 | 165 | 1.24E+04 | -93 |
| NF | — | — | — | — | — |
| NS | 1.10E+04 | 7.14E-03 | 22 | 1.12E+04 | -90 |

Table D–674. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 725. | 1.26E+04 | 823. | 1.26E+04 |
| FD | 1.69E+04 | 4.09E+04 | 1.70E+04 | 4.07E+04 |
| L1 | -1.37E-02 | 1.37E-02 | -1.37E-02 | 1.37E-02 |
| L3 | 758. | 2.55E+04 | 751. | 2.54E+04 |
| L4 | 758. | 2.55E+04 | 751. | 2.54E+04 |
| NF | — | — | — | — |
| NS | -3.68E-02 | 2.24E+04 | 211. | 2.19E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

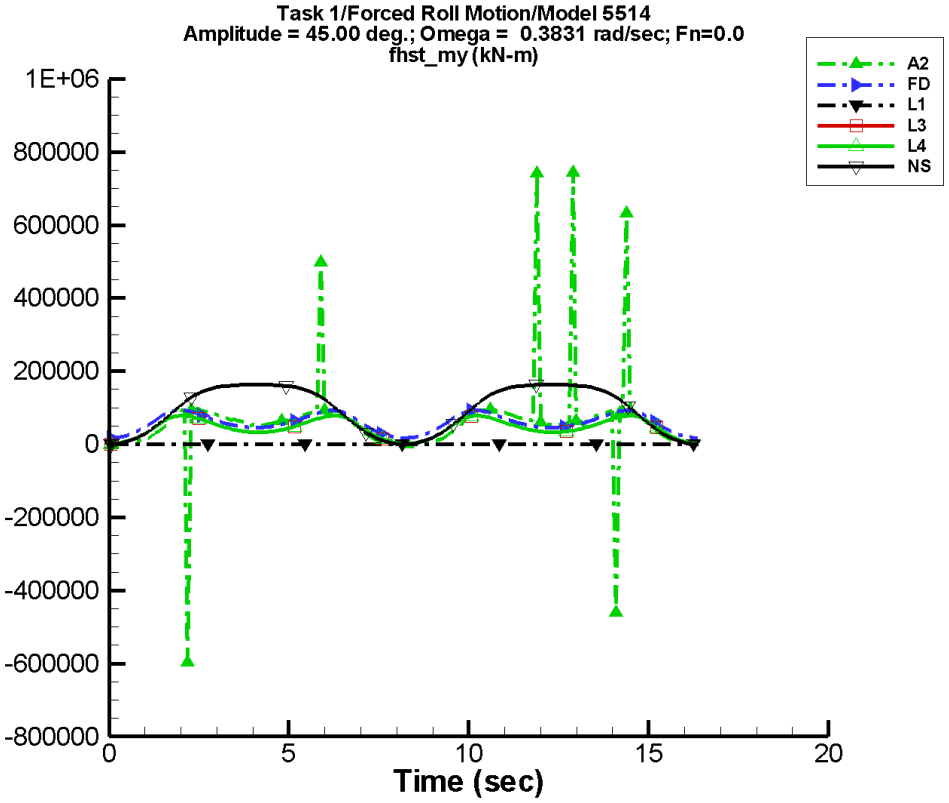
Figure D–338. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–675. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 4.05E+04 | 4.29E+03 | 35 | 4.53E+04 | -100 |
| FD | 6.02E+04 | 294. | -58 | 3.95E+04 | -90 |
| L1 | -5.61E-05 | 2.56E-02 | 179 | 1.06E-04 | -152 |
| L3 | 4.47E+04 | 185. | -36 | 4.06E+04 | -92 |
| L4 | 4.47E+04 | 185. | -36 | 4.06E+04 | -92 |
| NF | — | — | — | — | — |
| NS | 4.85E+04 | 1.39E-02 | 124 | 5.00E+04 | -90 |

Table D–676. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.84E+05 | 9.58E+04 | 1.08E+03 | 9.23E+04 |
| FD | 1.69E+04 | 9.27E+04 | 1.73E+04 | 9.27E+04 |
| L1 | -2.46E-02 | 2.46E-02 | -2.46E-02 | 2.46E-02 |
| L3 | 757. | 7.77E+04 | 695. | 7.77E+04 |
| L4 | 757. | 7.77E+04 | 695. | 7.77E+04 |
| NF | — | — | — | — |
| NS | -0.112 | 9.89E+04 | 293. | 9.82E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

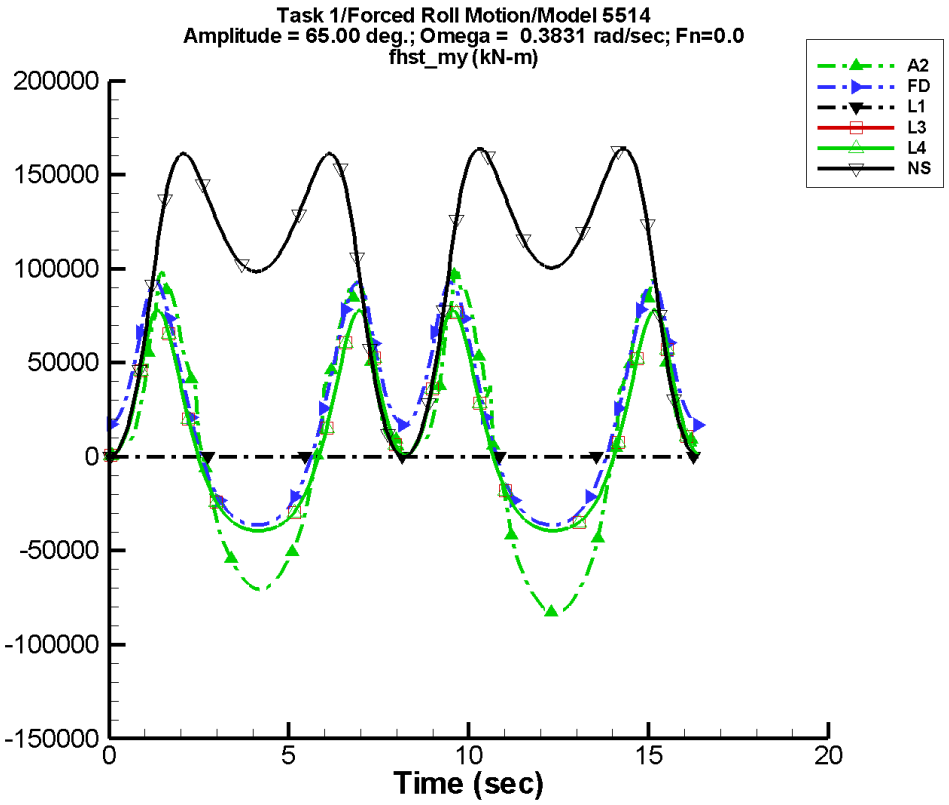
Figure D–339. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–677. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 6.21E+04 | 1.57E+04 | -166 | 4.45E+04 | -102 |
| FD | 5.91E+04 | 1.42E+03 | -60 | 9.94E+03 | -86 |
| L1 | -1.83E-04 | 3.33E-02 | 179 | 3.47E-04 | -151 |
| L3 | 4.46E+04 | 1.49E+03 | -12 | 1.52E+04 | -85 |
| L4 | 4.46E+04 | 1.49E+03 | -12 | 1.52E+04 | -85 |
| NF | — | — | — | — | — |
| NS | 9.49E+04 | 1.22 | -170 | 8.56E+04 | -90 |

Table D–678. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -5.97E+05 | 7.43E+05 | -1.11E+03 | 1.50E+05 |
| FD | 1.69E+04 | 9.30E+04 | 1.80E+04 | 9.23E+04 |
| L1 | -3.01E-02 | 3.01E-02 | -3.01E-02 | 3.01E-02 |
| L3 | 757. | 7.81E+04 | 745. | 7.76E+04 |
| L4 | 757. | 7.81E+04 | 745. | 7.76E+04 |
| NF | — | — | — | — |
| NS | -0.245 | 1.63E+05 | 291. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

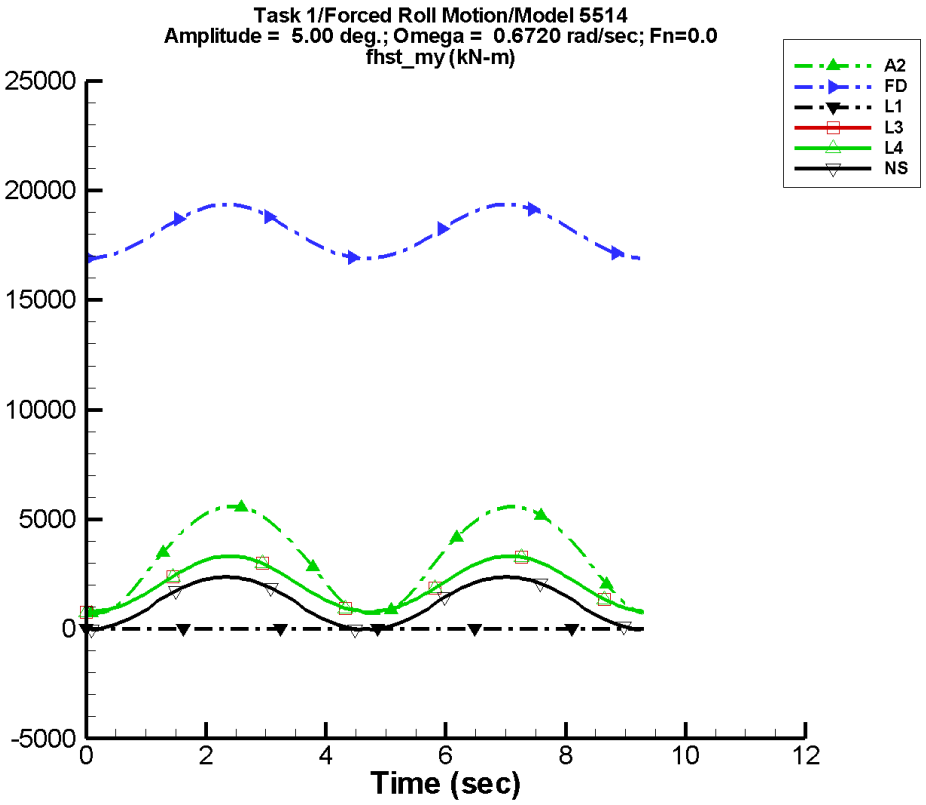
Figure D–340. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–679. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 5.62E+03 | 4.59E+03 | -8 | 5.64E+04 | 82 |
| FD | 2.16E+04 | 572. | -62 | 4.98E+04 | 88 |
| L1 | -5.16E-04 | 3.49E-02 | -180 | 9.80E-04 | -151 |
| L3 | 1.14E+04 | 1.93E+03 | -1 | 4.03E+04 | 83 |
| L4 | 1.14E+04 | 1.93E+03 | -1 | 4.03E+04 | 83 |
| NF | — | — | — | — | — |
| NS | 1.01E+05 | 1.49E+03 | 175 | 4.44E+04 | -90 |

Table D–680. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.33E+04 | 9.87E+04 | -8.17E+04 | 8.42E+04 |
| FD | -3.63E+04 | 9.30E+04 | -3.59E+04 | 8.46E+04 |
| L1 | -3.04E-02 | 3.04E-02 | -3.03E-02 | 3.03E-02 |
| L3 | -3.94E+04 | 7.81E+04 | -3.92E+04 | 7.51E+04 |
| L4 | -3.94E+04 | 7.81E+04 | -3.92E+04 | 7.51E+04 |
| NF | — | — | — | — |
| NS | -23.4 | 1.64E+05 | 215. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

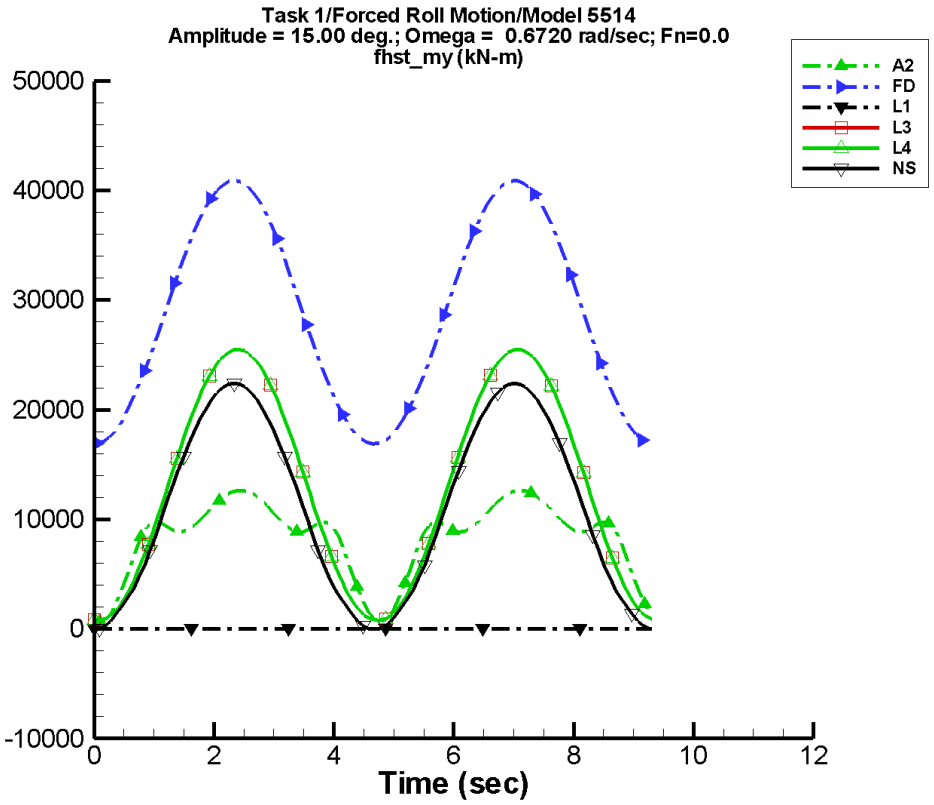
Figure D–341. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–681. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.26E+03 | 10.1 | -2 | 2.47E+03 | -97 |
| FD | 1.81E+04 | 2.21 | 150 | 1.24E+03 | -90 |
| L1 | -3.60E-07 | 4.72E-03 | 178 | 5.16E-07 | -155 |
| L3 | 2.03E+03 | 1.74 | -179 | 1.27E+03 | -95 |
| L4 | 2.03E+03 | 1.74 | -179 | 1.27E+03 | -95 |
| NF | — | — | — | — | — |
| NS | 1.18E+03 | 9.84E-03 | -15 | 1.23E+03 | -90 |

Table D–682. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 5.59E+03 | 716. | 5.49E+03 |
| FD | 1.69E+04 | 1.94E+04 | 1.69E+04 | 1.93E+04 |
| L1 | -4.71E-03 | 4.71E-03 | -4.69E-03 | 4.69E-03 |
| L3 | 758. | 3.32E+03 | 773. | 3.30E+03 |
| L4 | 758. | 3.32E+03 | 773. | 3.30E+03 |
| NF | — | — | — | — |
| NS | -25.9 | 2.36E+03 | 5.89 | 2.32E+03 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

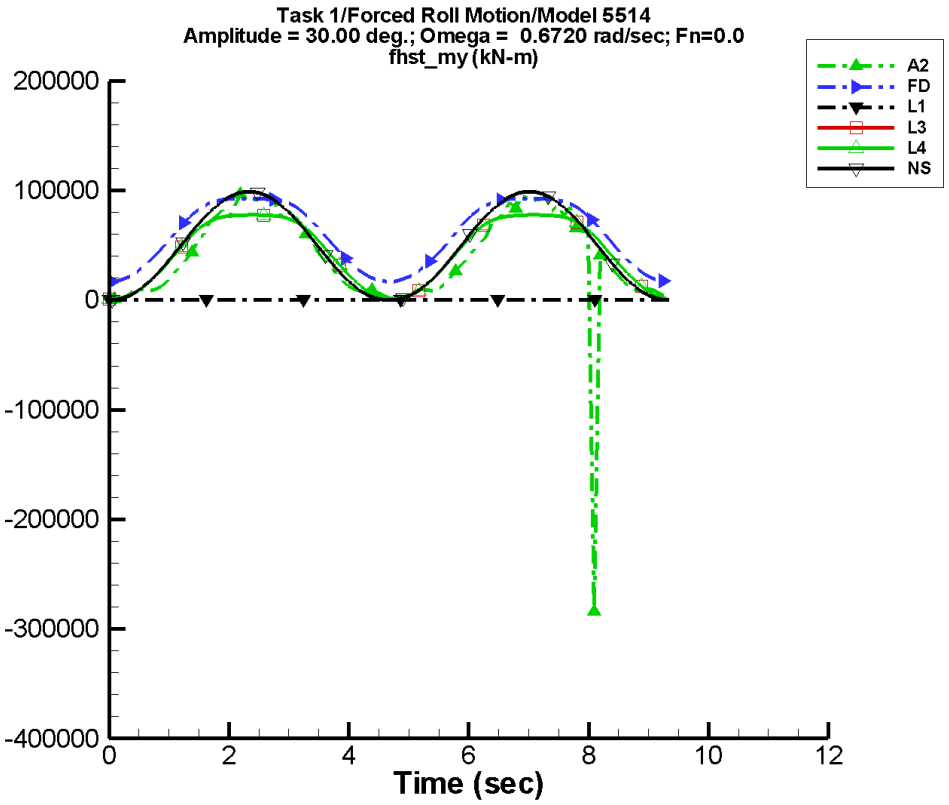
Figure D–342. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–683. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 8.29E+03 | 63.4 | -38 | 4.29E+03 | -96 |
| FD | 2.87E+04 | 11.2 | 150 | 1.21E+04 | -90 |
| L1 | -7.60E-06 | 1.38E-02 | 178 | 1.39E-05 | -155 |
| L3 | 1.30E+04 | 4.42 | 179 | 1.24E+04 | -95 |
| L4 | 1.30E+04 | 4.42 | 179 | 1.24E+04 | -95 |
| NF | — | — | — | — | — |
| NS | 1.10E+04 | 1.38E-02 | 172 | 1.12E+04 | -90 |

Table D–684. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 725. | 1.26E+04 | 1.17E+03 | 1.23E+04 |
| FD | 1.69E+04 | 4.09E+04 | 1.71E+04 | 4.05E+04 |
| L1 | -1.37E-02 | 1.37E-02 | -1.37E-02 | 1.37E-02 |
| L3 | 757. | 2.55E+04 | 767. | 2.53E+04 |
| L4 | 757. | 2.55E+04 | 767. | 2.53E+04 |
| NF | — | — | — | — |
| NS | -0.114 | 2.24E+04 | 211. | 2.19E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

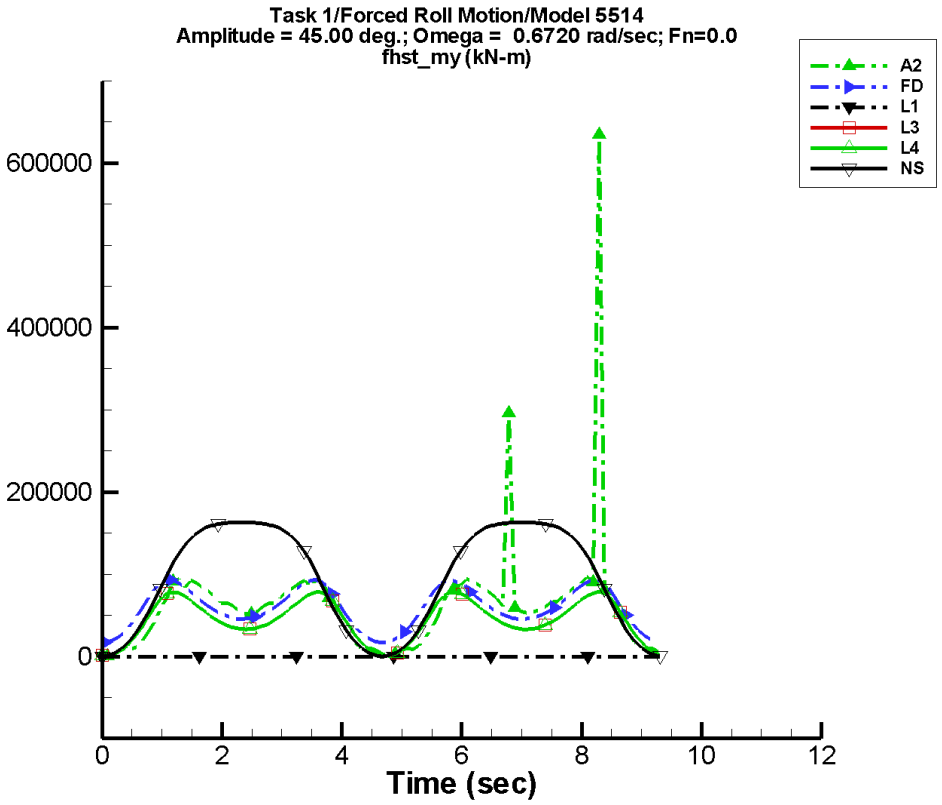
Figure D–343. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–685. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.88E+04 | 6.94E+03 | -44 | 4.40E+04 | -90 |
| FD | 5.99E+04 | 443. | -29 | 3.96E+04 | -89 |
| L1 | -5.79E-05 | 2.56E-02 | 178 | 1.09E-04 | -155 |
| L3 | 4.48E+04 | 378. | 0 | 4.07E+04 | -94 |
| L4 | 4.48E+04 | 378. | 0 | 4.07E+04 | -94 |
| NF | — | — | — | — | — |
| NS | 4.85E+04 | 5.13E-02 | 68 | 5.00E+04 | -90 |

Table D–686. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.84E+05 | 9.65E+04 | -1.09E+03 | 9.36E+04 |
| FD | 1.69E+04 | 9.27E+04 | 1.80E+04 | 9.29E+04 |
| L1 | -2.46E-02 | 2.46E-02 | -2.45E-02 | 2.45E-02 |
| L3 | 757. | 7.77E+04 | 785. | 7.77E+04 |
| L4 | 757. | 7.77E+04 | 785. | 7.77E+04 |
| NF | — | — | — | — |
| NS | -0.191 | 9.89E+04 | 293. | 9.82E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

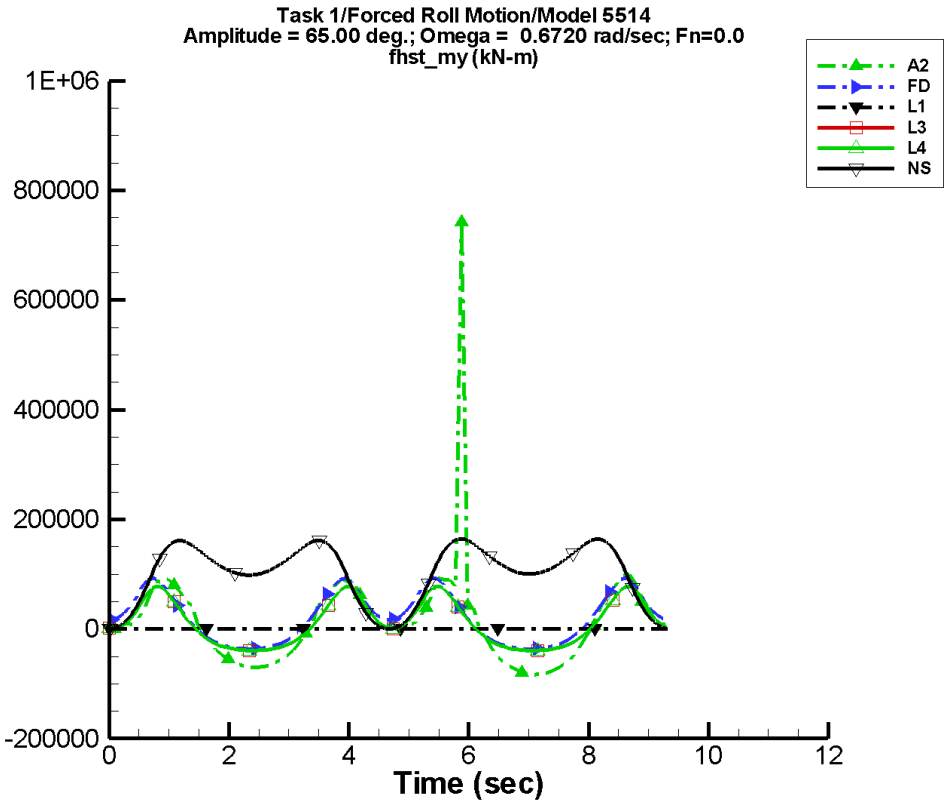
Figure D–344. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–687. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 6.23E+04 | 1.26E+04 | 140 | 3.93E+04 | -107 |
| FD | 5.79E+04 | 1.99E+03 | -30 | 1.10E+04 | -77 |
| L1 | -1.88E-04 | 3.33E-02 | 178 | 3.55E-04 | -155 |
| L3 | 4.49E+04 | 2.14E+03 | 0 | 1.57E+04 | -84 |
| L4 | 4.49E+04 | 2.14E+03 | 0 | 1.57E+04 | -84 |
| NF | — | — | — | — | — |
| NS | 9.49E+04 | 0.490 | 21 | 8.56E+04 | -90 |

Table D–688. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 726. | 6.35E+05 | 926. | 1.55E+05 |
| FD | 1.69E+04 | 9.30E+04 | 2.01E+04 | 8.48E+04 |
| L1 | -3.01E-02 | 3.01E-02 | -3.01E-02 | 3.01E-02 |
| L3 | 758. | 7.81E+04 | 1.36E+03 | 7.52E+04 |
| L4 | 758. | 7.81E+04 | 1.36E+03 | 7.52E+04 |
| NF | — | — | — | — |
| NS | -0.296 | 1.63E+05 | 291. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

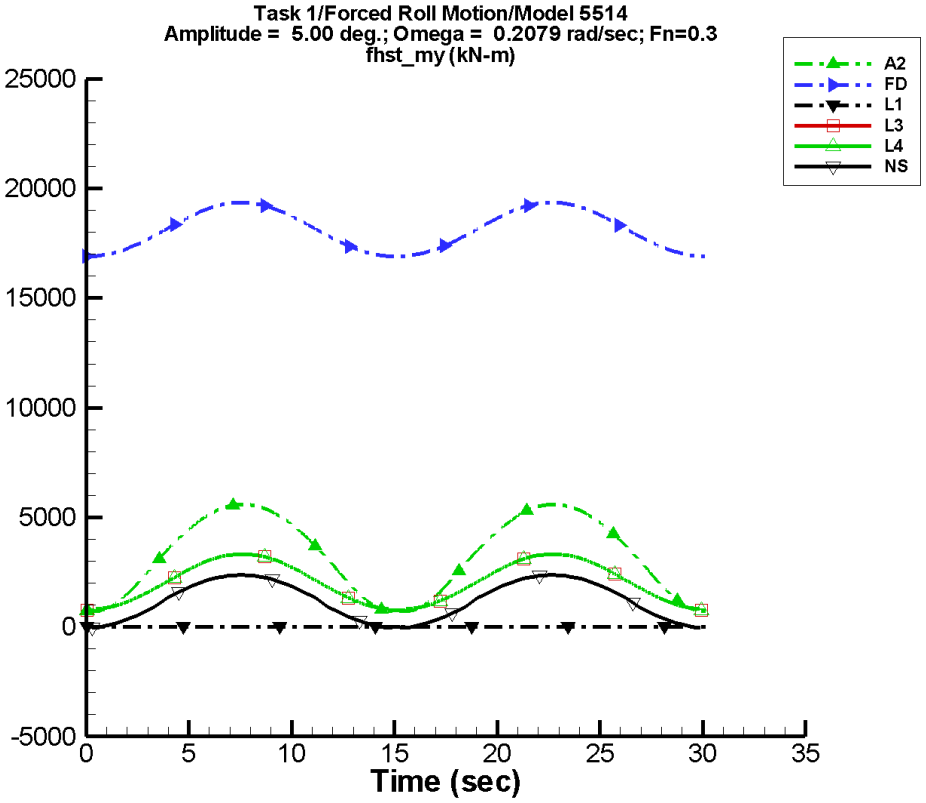
Figure D–345. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–689. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 1.38E+04 | 1.26E+04 | -113 | 5.79E+04 | 64 |
| FD | 2.12E+04 | 1.40E+03 | -30 | 4.89E+04 | 88 |
| L1 | -5.26E-04 | 3.49E-02 | 179 | 1.00E-03 | -154 |
| L3 | 1.14E+04 | 1.75E+03 | -4 | 4.04E+04 | 81 |
| L4 | 1.14E+04 | 1.75E+03 | -4 | 4.04E+04 | 81 |
| NF | — | — | — | — | — |
| NS | 1.01E+05 | 1.46E+03 | -180 | 4.45E+04 | -90 |

Table D–690. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.32E+04 | 7.43E+05 | -8.20E+04 | 1.50E+05 |
| FD | -3.63E+04 | 9.30E+04 | -3.51E+04 | 7.15E+04 |
| L1 | -3.04E-02 | 3.04E-02 | -3.02E-02 | 3.02E-02 |
| L3 | -3.93E+04 | 7.81E+04 | -3.89E+04 | 6.91E+04 |
| L4 | -3.93E+04 | 7.81E+04 | -3.89E+04 | 6.91E+04 |
| NF | — | — | — | — |
| NS | -23.3 | 1.64E+05 | 216. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

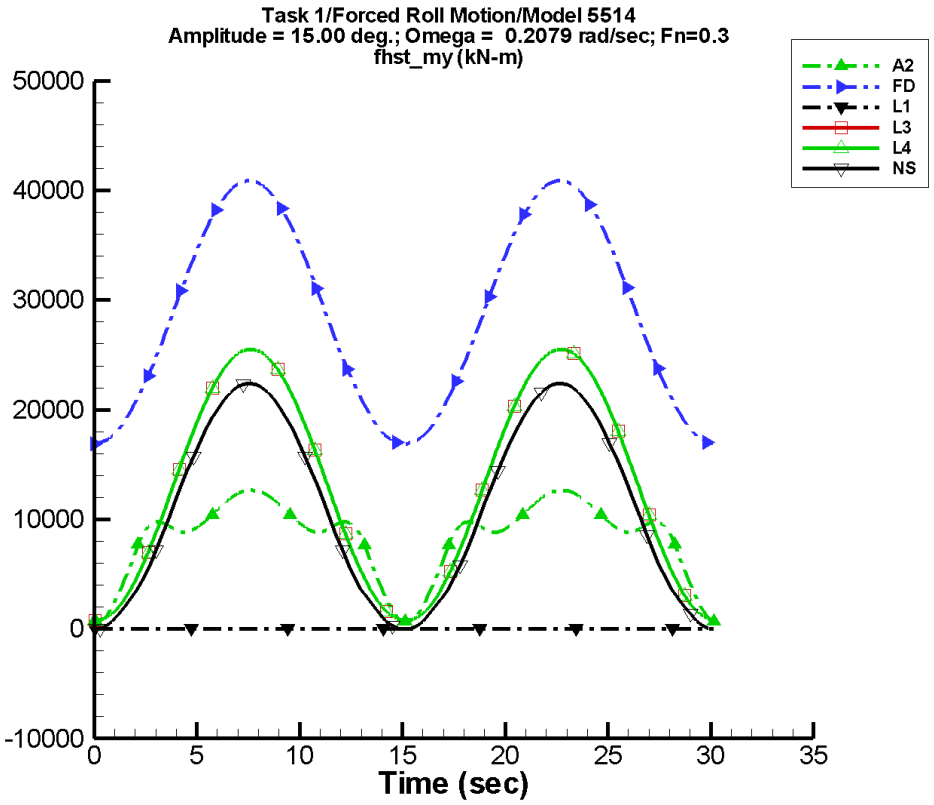
Figure D–346. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–691. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.26E+03 | 2.39 | 6 | 2.47E+03 | -92 |
| FD | 1.81E+04 | 0.732 | -176 | 1.24E+03 | -90 |
| L1 | -2.69E-07 | 4.72E-03 | 179 | 1.08E-06 | -93 |
| L3 | 2.03E+03 | 1.97 | 118 | 1.28E+03 | -91 |
| L4 | 2.03E+03 | 1.97 | 118 | 1.28E+03 | -91 |
| NF | — | — | — | — | — |
| NS | 1.18E+03 | 1.09E-02 | -77 | 1.23E+03 | -90 |

Table D–692. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 5.59E+03 | 711. | 5.58E+03 |
| FD | 1.69E+04 | 1.94E+04 | 1.69E+04 | 1.94E+04 |
| L1 | -4.71E-03 | 4.71E-03 | -4.71E-03 | 4.71E-03 |
| L3 | 756. | 3.32E+03 | 759. | 3.32E+03 |
| L4 | 756. | 3.32E+03 | 759. | 3.32E+03 |
| NF | — | — | — | — |
| NS | -25.9 | 2.36E+03 | 5.85 | 2.32E+03 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

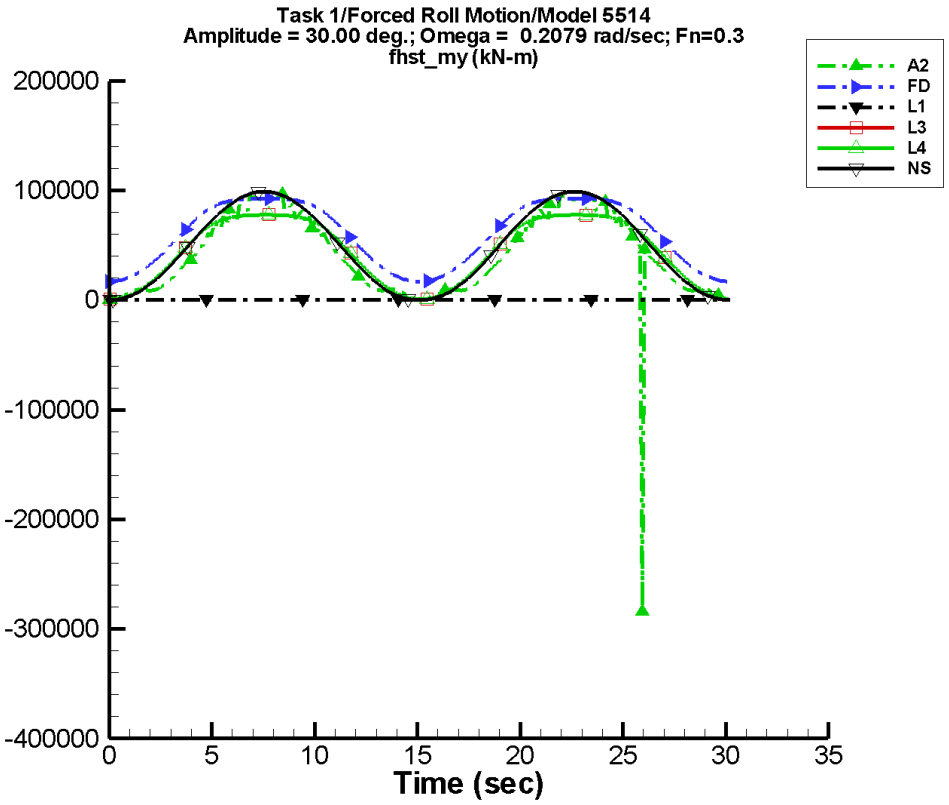
Figure D–347. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–693. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 8.28E+03 | 33.0 | -45 | 4.25E+03 | -91 |
| FD | 2.87E+04 | 3.66 | -177 | 1.21E+04 | -90 |
| L1 | -7.33E-06 | 1.38E-02 | 179 | 2.89E-05 | -93 |
| L3 | 1.30E+04 | 7.70 | 118 | 1.24E+04 | -91 |
| L4 | 1.30E+04 | 7.70 | 118 | 1.24E+04 | -91 |
| NF | — | — | — | — | — |
| NS | 1.10E+04 | 9.48E-03 | 123 | 1.12E+04 | -90 |

Table D–694. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 1.27E+04 | 706. | 1.26E+04 |
| FD | 1.69E+04 | 4.09E+04 | 1.69E+04 | 4.08E+04 |
| L1 | -1.37E-02 | 1.37E-02 | -1.37E-02 | 1.37E-02 |
| L3 | 759. | 2.55E+04 | 780. | 2.55E+04 |
| L4 | 759. | 2.55E+04 | 780. | 2.55E+04 |
| NF | — | — | — | — |
| NS | -0.124 | 2.24E+04 | 211. | 2.19E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

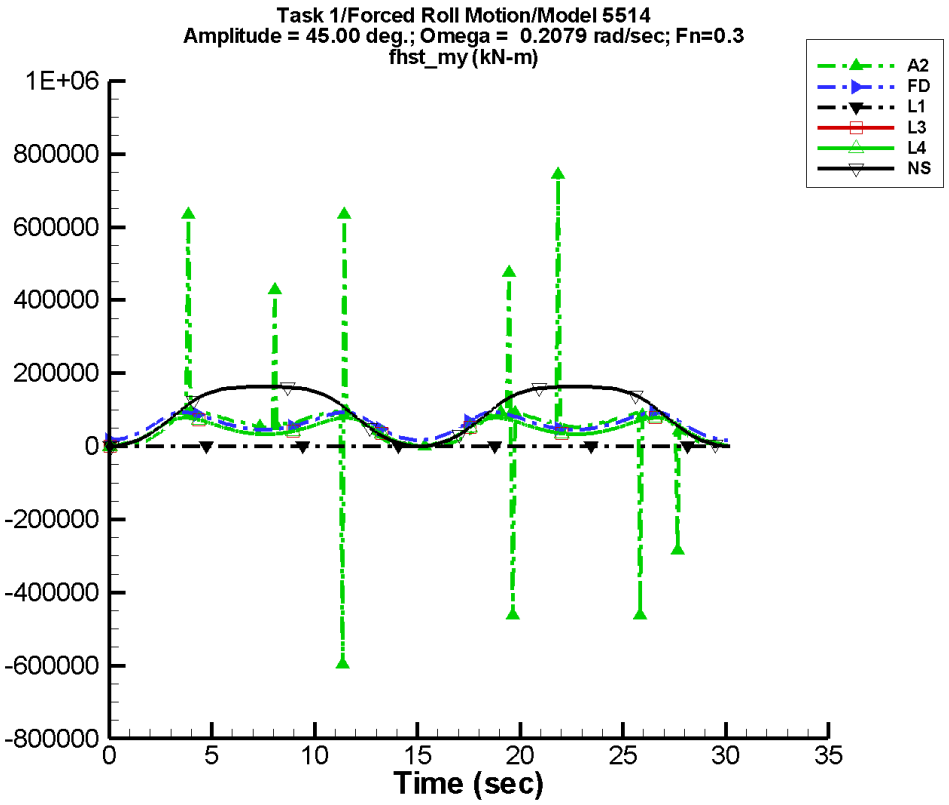
Figure D–348. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–695. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 4.11E+04 | 2.02E+03 | -44 | 4.51E+04 | -90 |
| FD | 6.01E+04 | 141. | 12 | 4.00E+04 | -89 |
| L1 | -5.74E-05 | 2.55E-02 | 179 | 2.26E-04 | -93 |
| L3 | 4.48E+04 | 331. | -58 | 4.00E+04 | -91 |
| L4 | 4.48E+04 | 331. | -58 | 4.00E+04 | -91 |
| NF | — | — | — | — | — |
| NS | 4.85E+04 | 8.84E-03 | 113 | 5.00E+04 | -90 |

Table D–696. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.84E+05 | 9.66E+04 | 612. | 9.33E+04 |
| FD | 1.69E+04 | 9.27E+04 | 1.68E+04 | 9.28E+04 |
| L1 | -2.46E-02 | 2.46E-02 | -2.46E-02 | 2.46E-02 |
| L3 | 763. | 7.77E+04 | 819. | 7.77E+04 |
| L4 | 763. | 7.77E+04 | 819. | 7.77E+04 |
| NF | — | — | — | — |
| NS | -0.377 | 9.89E+04 | 293. | 9.82E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

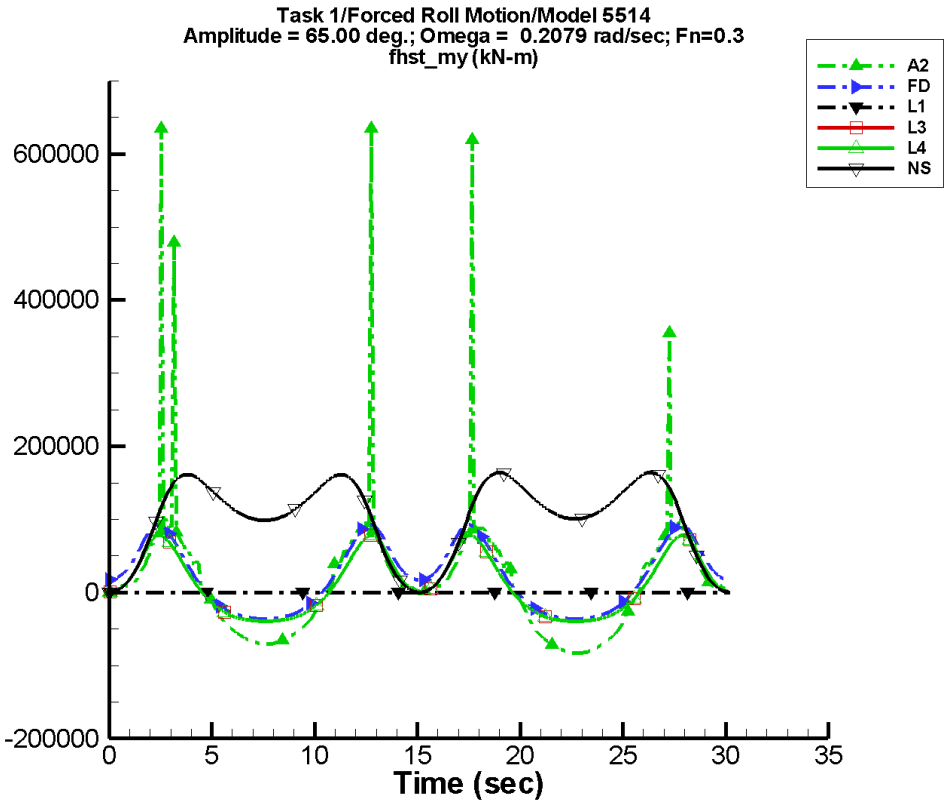
Figure D–349. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–697. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 5.33E+04 | 4.03E+03 | -38 | 3.73E+04 | -76 |
| FD | 5.86E+04 | 632. | 5 | 1.23E+04 | -78 |
| L1 | -1.87E-04 | 3.31E-02 | 179 | 7.38E-04 | -93 |
| L3 | 4.52E+04 | 2.34E+03 | -61 | 1.10E+04 | -92 |
| L4 | 4.52E+04 | 2.34E+03 | -61 | 1.10E+04 | -92 |
| NF | — | — | — | — | — |
| NS | 9.49E+04 | 0.901 | 8 | 8.56E+04 | -90 |

Table D–698. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -5.97E+05 | 7.43E+05 | 731. | 1.64E+05 |
| FD | 1.69E+04 | 9.30E+04 | 1.71E+04 | 9.22E+04 |
| L1 | -3.01E-02 | 3.01E-02 | -3.01E-02 | 3.01E-02 |
| L3 | 758. | 7.81E+04 | 903. | 7.78E+04 |
| L4 | 758. | 7.81E+04 | 903. | 7.78E+04 |
| NF | — | — | — | — |
| NS | -0.522 | 1.63E+05 | 291. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

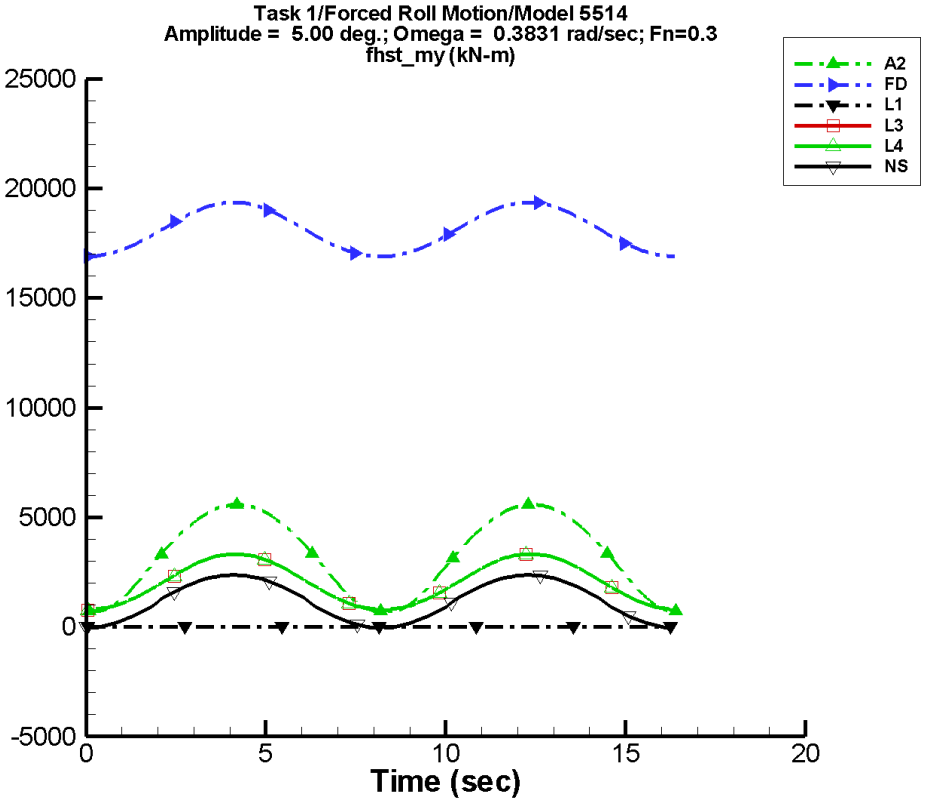
Figure D–350. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–699. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 1.17E+04 | 5.88E+03 | -24 | 6.16E+04 | 83 |
| FD | 2.14E+04 | 540. | -12 | 4.84E+04 | 87 |
| L1 | -5.28E-04 | 3.44E-02 | 180 | 2.08E-03 | -93 |
| L3 | 1.22E+04 | 2.96E+03 | -64 | 4.48E+04 | 88 |
| L4 | 1.22E+04 | 2.96E+03 | -64 | 4.48E+04 | 88 |
| NF | — | — | — | — | — |
| NS | 1.01E+05 | 1.48E+03 | 175 | 4.44E+04 | -90 |

Table D–700. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.33E+04 | 6.35E+05 | -8.28E+04 | 1.77E+05 |
| FD | -3.63E+04 | 9.30E+04 | -3.62E+04 | 9.05E+04 |
| L1 | -3.04E-02 | 3.04E-02 | -3.04E-02 | 3.04E-02 |
| L3 | -3.94E+04 | 7.81E+04 | -3.93E+04 | 7.72E+04 |
| L4 | -3.94E+04 | 7.81E+04 | -3.93E+04 | 7.72E+04 |
| NF | — | — | — | — |
| NS | -23.3 | 1.64E+05 | 216. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

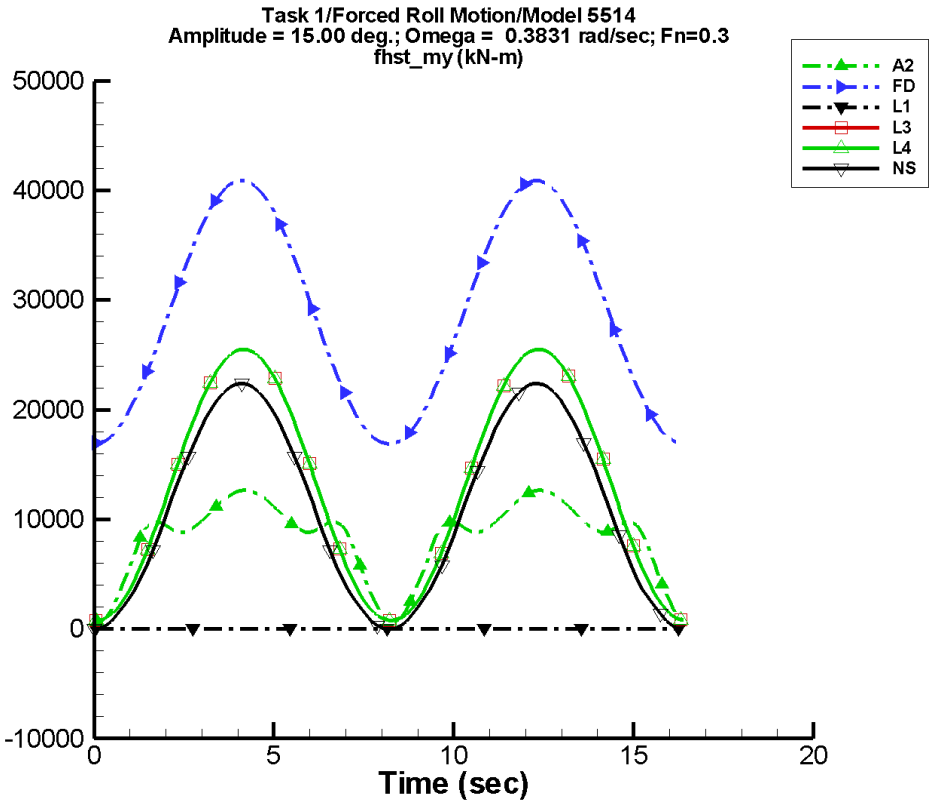
Figure D–351. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–701. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.26E+03 | 1.40 | 13 | 2.47E+03 | -94 |
| FD | 1.81E+04 | 1.34 | 121 | 1.24E+03 | -90 |
| L1 | -2.93E-07 | 4.72E-03 | 179 | 5.05E-07 | -152 |
| L3 | 2.03E+03 | 1.11 | 180 | 1.28E+03 | -93 |
| L4 | 2.03E+03 | 1.11 | 180 | 1.28E+03 | -93 |
| NF | — | — | — | — | — |
| NS | 1.18E+03 | 8.23E-03 | -11 | 1.23E+03 | -90 |

Table D–702. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 5.59E+03 | 703. | 5.58E+03 |
| FD | 1.69E+04 | 1.94E+04 | 1.69E+04 | 1.93E+04 |
| L1 | -4.71E-03 | 4.71E-03 | -4.71E-03 | 4.71E-03 |
| L3 | 756. | 3.32E+03 | 764. | 3.31E+03 |
| L4 | 756. | 3.32E+03 | 764. | 3.31E+03 |
| NF | — | — | — | — |
| NS | -25.9 | 2.36E+03 | 5.86 | 2.32E+03 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

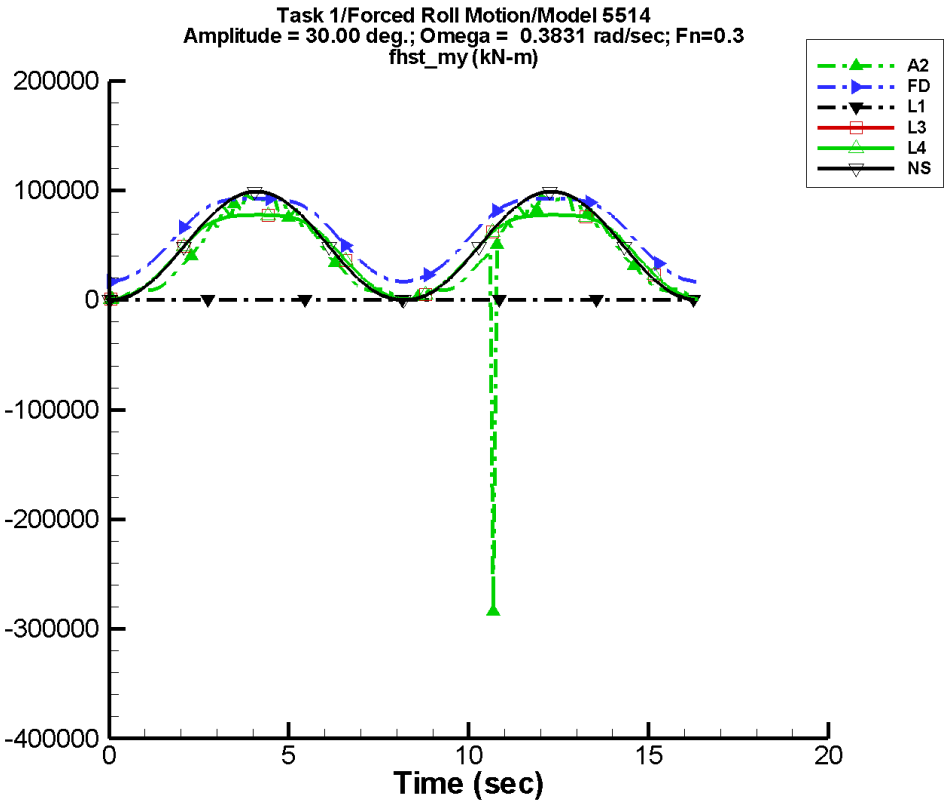
Figure D–352. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–703. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 8.28E+03 | 34.9 | -48 | 4.25E+03 | -93 |
| FD | 2.87E+04 | 8.20 | 120 | 1.21E+04 | -90 |
| L1 | -7.24E-06 | 1.38E-02 | 179 | 1.35E-05 | -152 |
| L3 | 1.30E+04 | 5.54 | 166 | 1.24E+04 | -93 |
| L4 | 1.30E+04 | 5.54 | 166 | 1.24E+04 | -93 |
| NF | — | — | — | — | — |
| NS | 1.10E+04 | 7.14E-03 | 22 | 1.12E+04 | -90 |

Table D–704. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 725. | 1.26E+04 | 823. | 1.26E+04 |
| FD | 1.69E+04 | 4.09E+04 | 1.70E+04 | 4.07E+04 |
| L1 | -1.37E-02 | 1.37E-02 | -1.37E-02 | 1.37E-02 |
| L3 | 757. | 2.55E+04 | 752. | 2.54E+04 |
| L4 | 757. | 2.55E+04 | 752. | 2.54E+04 |
| NF | — | — | — | — |
| NS | -3.68E-02 | 2.24E+04 | 211. | 2.19E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

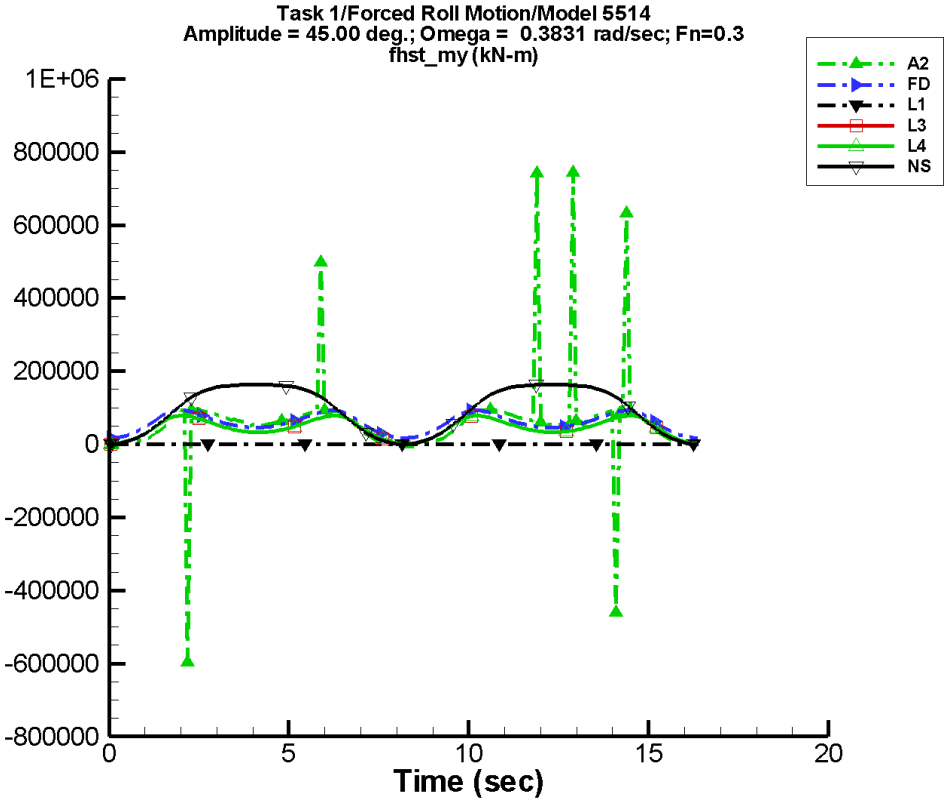
Figure D–353. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–705. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 4.05E+04 | 4.29E+03 | 35 | 4.53E+04 | -100 |
| FD | 6.02E+04 | 294. | -58 | 3.95E+04 | -90 |
| L1 | -5.61E-05 | 2.56E-02 | 179 | 1.06E-04 | -152 |
| L3 | 4.47E+04 | 185. | -36 | 4.06E+04 | -92 |
| L4 | 4.47E+04 | 185. | -36 | 4.06E+04 | -92 |
| NF | — | — | — | — | — |
| NS | 4.85E+04 | 1.39E-02 | 124 | 5.00E+04 | -90 |

Table D–706. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.84E+05 | 9.58E+04 | 1.08E+03 | 9.23E+04 |
| FD | 1.69E+04 | 9.27E+04 | 1.73E+04 | 9.27E+04 |
| L1 | -2.46E-02 | 2.46E-02 | -2.46E-02 | 2.46E-02 |
| L3 | 758. | 7.77E+04 | 696. | 7.77E+04 |
| L4 | 758. | 7.77E+04 | 696. | 7.77E+04 |
| NF | — | — | — | — |
| NS | -0.112 | 9.89E+04 | 293. | 9.82E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

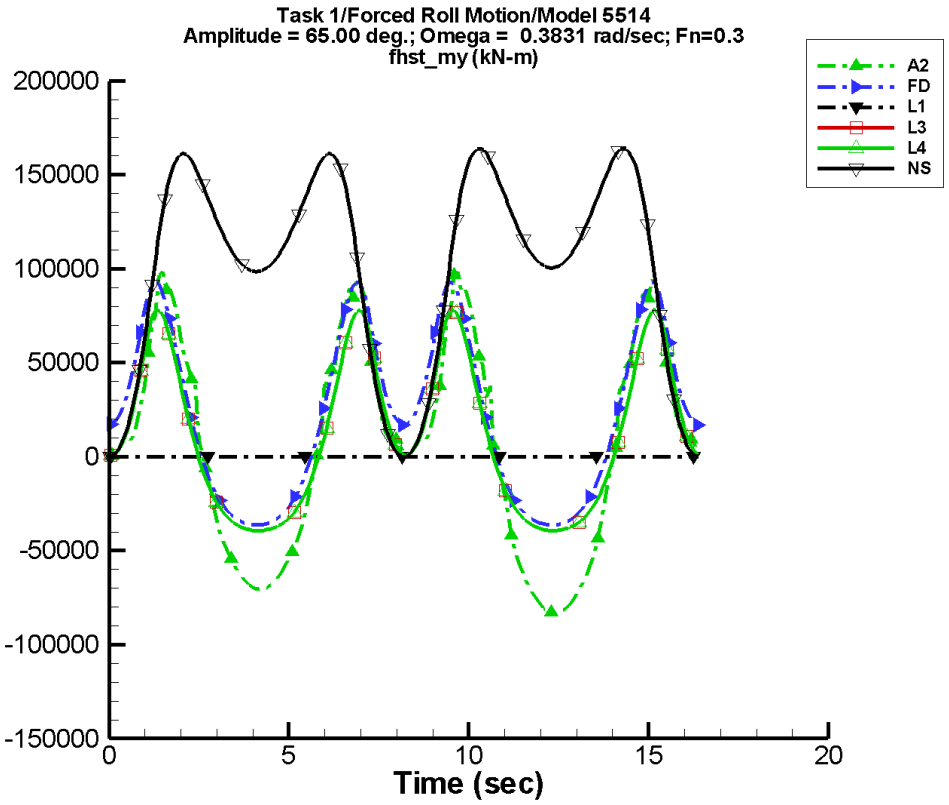
Figure D–354. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–707. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 6.21E+04 | 1.57E+04 | -166 | 4.45E+04 | -102 |
| FD | 5.91E+04 | 1.42E+03 | -60 | 9.94E+03 | -86 |
| L1 | -1.83E-04 | 3.33E-02 | 179 | 3.47E-04 | -151 |
| L3 | 4.46E+04 | 1.49E+03 | -12 | 1.52E+04 | -85 |
| L4 | 4.46E+04 | 1.49E+03 | -12 | 1.52E+04 | -85 |
| NF | — | — | — | — | — |
| NS | 9.49E+04 | 1.22 | -170 | 8.56E+04 | -90 |

Table D–708. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -5.97E+05 | 7.43E+05 | -1.11E+03 | 1.50E+05 |
| FD | 1.69E+04 | 9.30E+04 | 1.80E+04 | 9.23E+04 |
| L1 | -3.01E-02 | 3.01E-02 | -3.01E-02 | 3.01E-02 |
| L3 | 759. | 7.81E+04 | 745. | 7.76E+04 |
| L4 | 759. | 7.81E+04 | 745. | 7.76E+04 |
| NF | — | — | — | — |
| NS | -0.245 | 1.63E+05 | 291. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

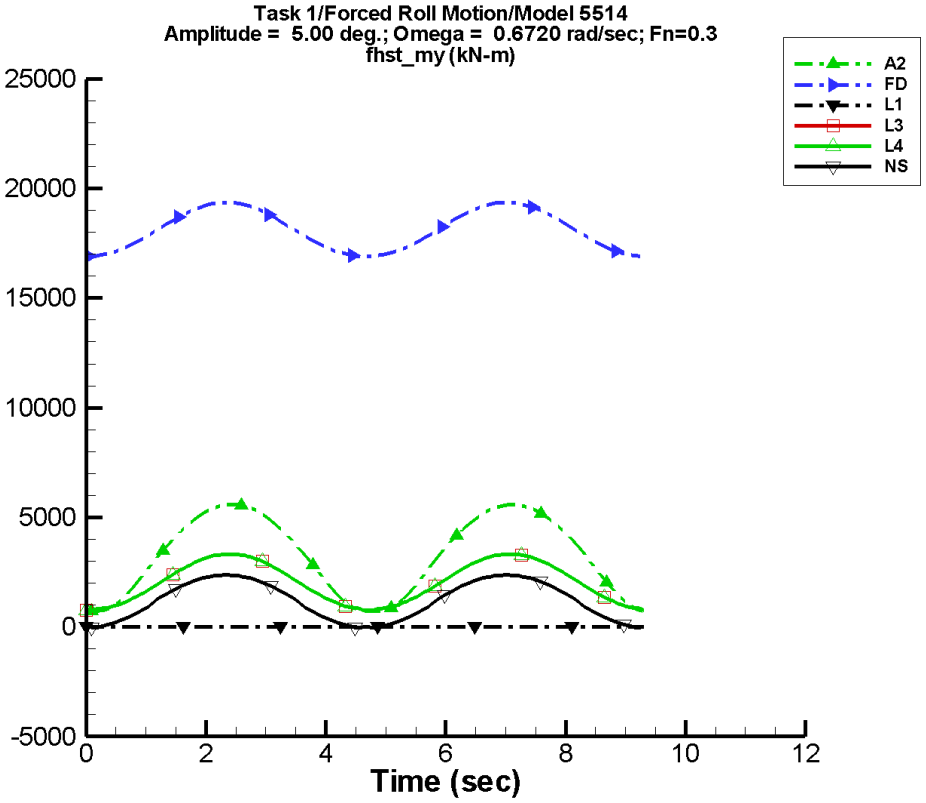
Figure D–355. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–709. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 5.62E+03 | 4.59E+03 | -8 | 5.64E+04 | 82 |
| FD | 2.16E+04 | 572. | -62 | 4.98E+04 | 88 |
| L1 | -5.16E-04 | 3.49E-02 | -180 | 9.80E-04 | -151 |
| L3 | 1.14E+04 | 1.93E+03 | -1 | 4.03E+04 | 83 |
| L4 | 1.14E+04 | 1.93E+03 | -1 | 4.03E+04 | 83 |
| NF | — | — | — | — | — |
| NS | 1.01E+05 | 1.49E+03 | 175 | 4.44E+04 | -90 |

Table D–710. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.33E+04 | 9.87E+04 | -8.17E+04 | 8.42E+04 |
| FD | -3.63E+04 | 9.30E+04 | -3.59E+04 | 8.46E+04 |
| L1 | -3.04E-02 | 3.04E-02 | -3.03E-02 | 3.03E-02 |
| L3 | -3.94E+04 | 7.81E+04 | -3.92E+04 | 7.51E+04 |
| L4 | -3.94E+04 | 7.81E+04 | -3.92E+04 | 7.51E+04 |
| NF | — | — | — | — |
| NS | -23.4 | 1.64E+05 | 215. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

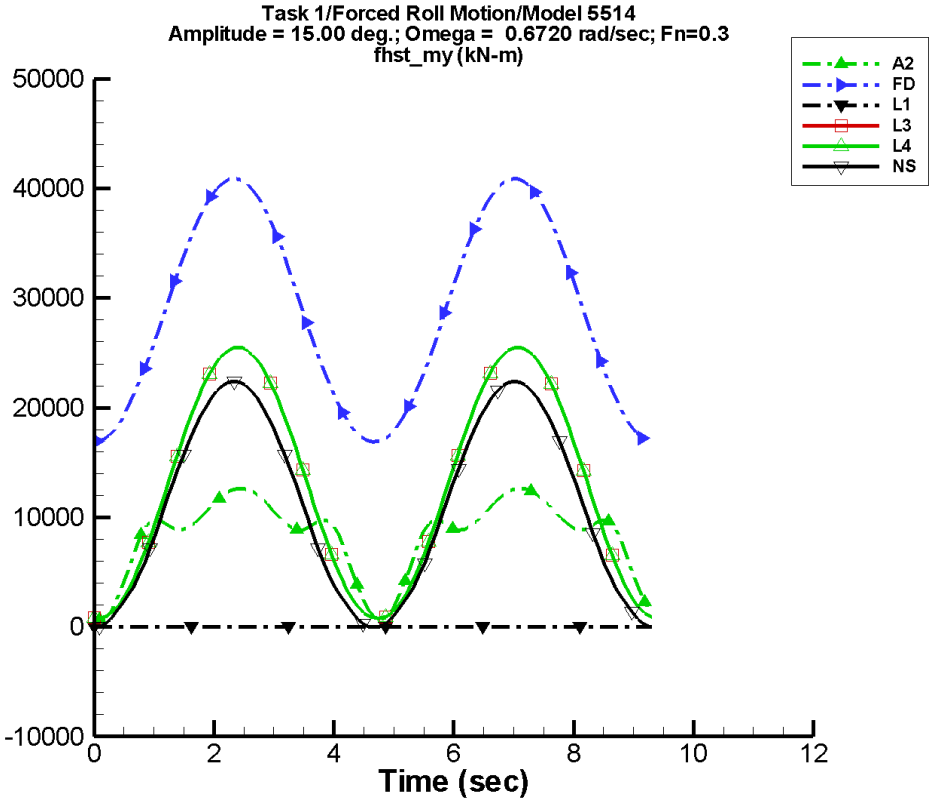
Figure D–356. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–711. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.26E+03 | 10.1 | -2 | 2.47E+03 | -97 |
| FD | 1.81E+04 | 2.22 | 149 | 1.24E+03 | -90 |
| L1 | -3.60E-07 | 4.72E-03 | 178 | 5.16E-07 | -155 |
| L3 | 2.03E+03 | 1.77 | -178 | 1.27E+03 | -95 |
| L4 | 2.03E+03 | 1.77 | -178 | 1.27E+03 | -95 |
| NF | — | — | — | — | — |
| NS | 1.18E+03 | 9.84E-03 | -15 | 1.23E+03 | -90 |

Table D–712. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 724. | 5.59E+03 | 716. | 5.49E+03 |
| FD | 1.69E+04 | 1.94E+04 | 1.69E+04 | 1.93E+04 |
| L1 | -4.71E-03 | 4.71E-03 | -4.69E-03 | 4.69E-03 |
| L3 | 759. | 3.32E+03 | 773. | 3.30E+03 |
| L4 | 759. | 3.32E+03 | 773. | 3.30E+03 |
| NF | — | — | — | — |
| NS | -25.9 | 2.36E+03 | 5.89 | 2.32E+03 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

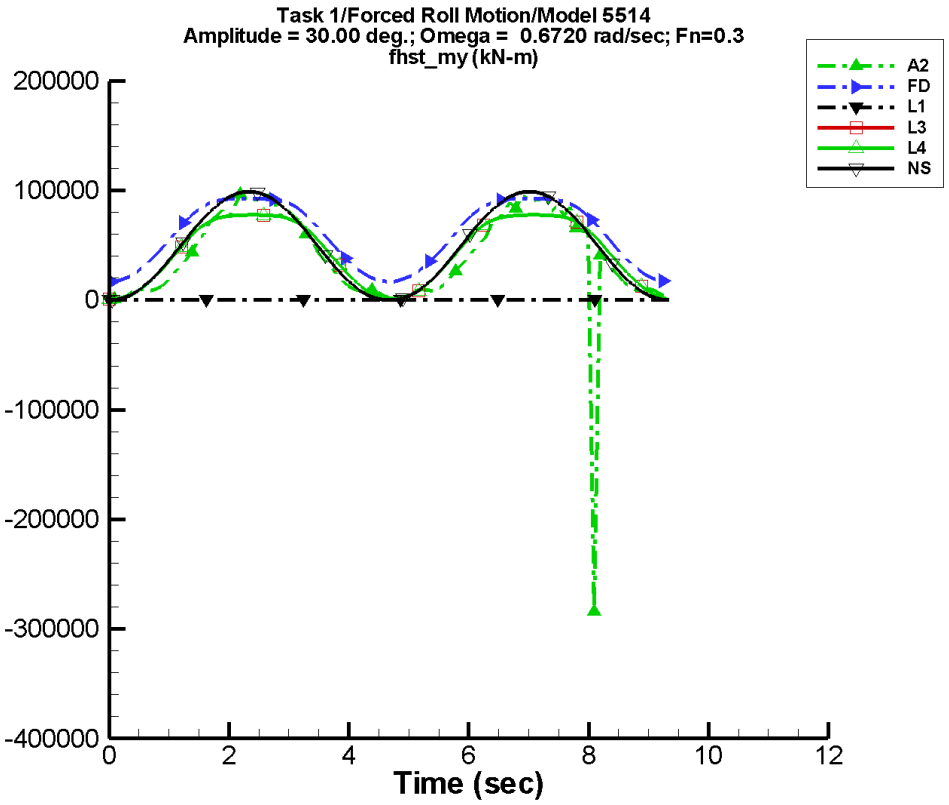
Figure D–357. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–713. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 8.29E+03 | 63.4 | -38 | 4.29E+03 | -96 |
| FD | 2.87E+04 | 11.2 | 150 | 1.21E+04 | -90 |
| L1 | -7.60E-06 | 1.38E-02 | 178 | 1.39E-05 | -155 |
| L3 | 1.30E+04 | 4.43 | 179 | 1.24E+04 | -95 |
| L4 | 1.30E+04 | 4.43 | 179 | 1.24E+04 | -95 |
| NF | — | — | — | — | — |
| NS | 1.10E+04 | 1.38E-02 | 172 | 1.12E+04 | -90 |

Table D–714. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 725. | 1.26E+04 | 1.17E+03 | 1.23E+04 |
| FD | 1.69E+04 | 4.09E+04 | 1.71E+04 | 4.05E+04 |
| L1 | -1.37E-02 | 1.37E-02 | -1.37E-02 | 1.37E-02 |
| L3 | 756. | 2.55E+04 | 767. | 2.53E+04 |
| L4 | 756. | 2.55E+04 | 767. | 2.53E+04 |
| NF | — | — | — | — |
| NS | -0.114 | 2.24E+04 | 211. | 2.19E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

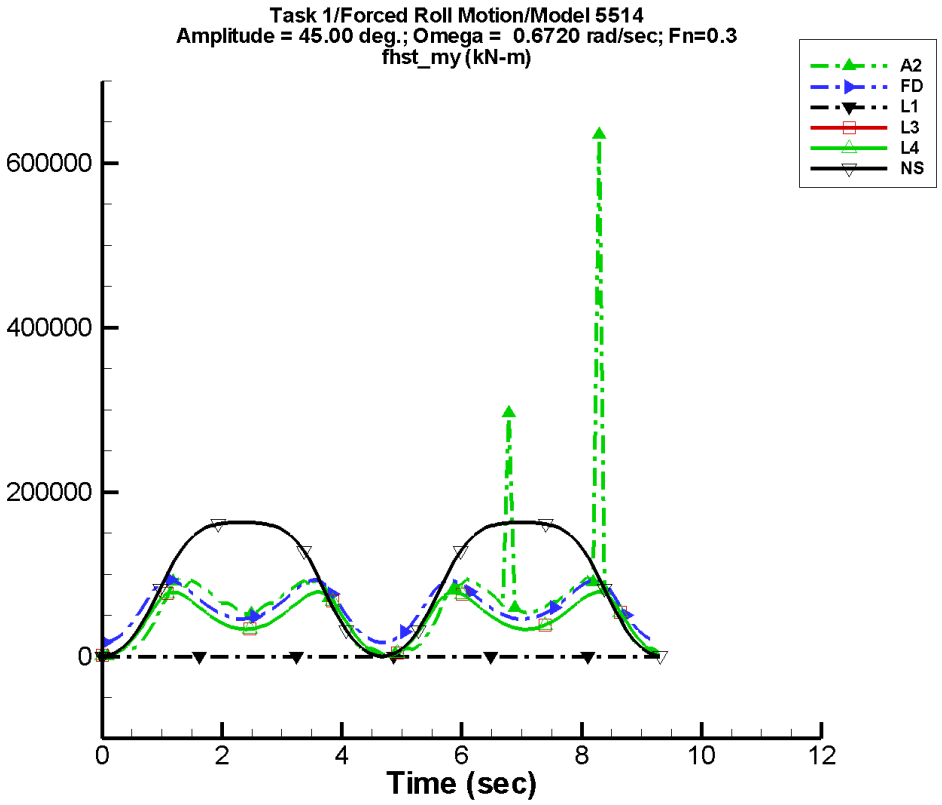
Figure D–358. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–715. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 3.88E+04 | 6.94E+03 | -44 | 4.40E+04 | -90 |
| FD | 5.99E+04 | 443. | -29 | 3.96E+04 | -89 |
| L1 | -5.79E-05 | 2.56E-02 | 178 | 1.09E-04 | -155 |
| L3 | 4.48E+04 | 378. | 0 | 4.07E+04 | -94 |
| L4 | 4.48E+04 | 378. | 0 | 4.07E+04 | -94 |
| NF | — | — | — | — | — |
| NS | 4.85E+04 | 5.13E-02 | 68 | 5.00E+04 | -90 |

Table D–716. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.84E+05 | 9.65E+04 | -1.09E+03 | 9.36E+04 |
| FD | 1.69E+04 | 9.27E+04 | 1.80E+04 | 9.29E+04 |
| L1 | -2.46E-02 | 2.46E-02 | -2.45E-02 | 2.45E-02 |
| L3 | 757. | 7.77E+04 | 785. | 7.77E+04 |
| L4 | 757. | 7.77E+04 | 785. | 7.77E+04 |
| NF | — | — | — | — |
| NS | -0.191 | 9.89E+04 | 293. | 9.82E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

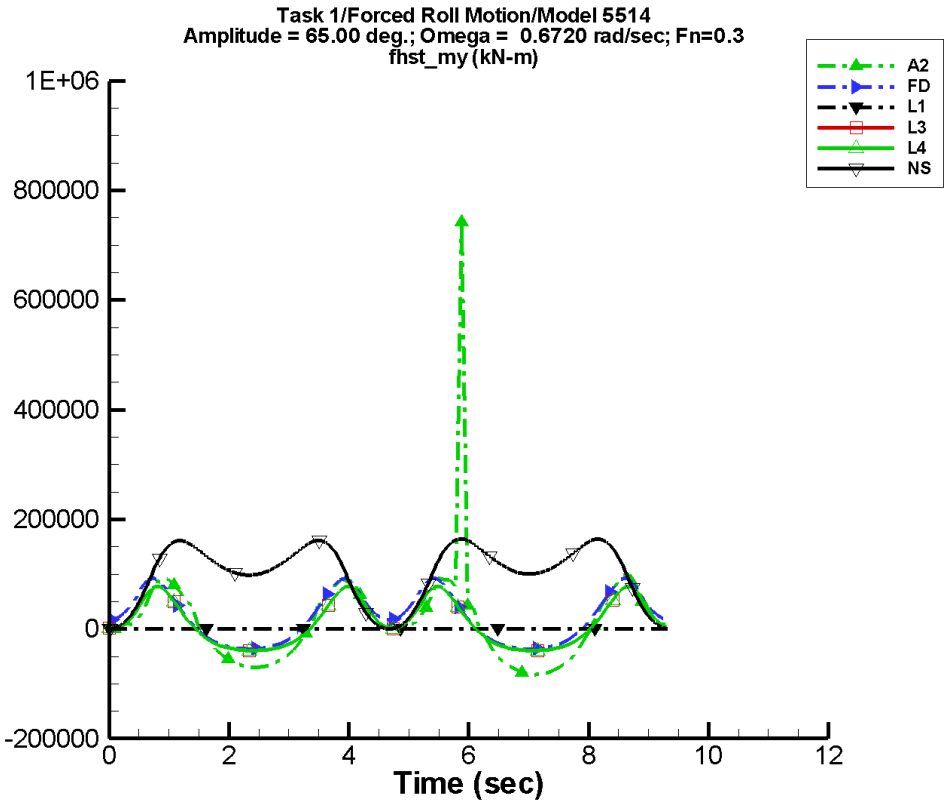
Figure D–359. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–717. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 6.23E+04 | 1.26E+04 | 140 | 3.93E+04 | -107 |
| FD | 5.79E+04 | 1.99E+03 | -30 | 1.10E+04 | -77 |
| L1 | -1.88E-04 | 3.33E-02 | 178 | 3.55E-04 | -155 |
| L3 | 4.49E+04 | 2.14E+03 | 0 | 1.57E+04 | -84 |
| L4 | 4.49E+04 | 2.14E+03 | 0 | 1.57E+04 | -84 |
| NF | — | — | — | — | — |
| NS | 9.49E+04 | 0.490 | 21 | 8.56E+04 | -90 |

Table D–718. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | 726. | 6.35E+05 | 926. | 1.55E+05 |
| FD | 1.69E+04 | 9.30E+04 | 2.01E+04 | 8.48E+04 |
| L1 | -3.01E-02 | 3.01E-02 | -3.01E-02 | 3.01E-02 |
| L3 | 758. | 7.81E+04 | 1.36E+03 | 7.52E+04 |
| L4 | 758. | 7.81E+04 | 1.36E+03 | 7.52E+04 |
| NF | — | — | — | — |
| NS | -0.296 | 1.63E+05 | 291. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

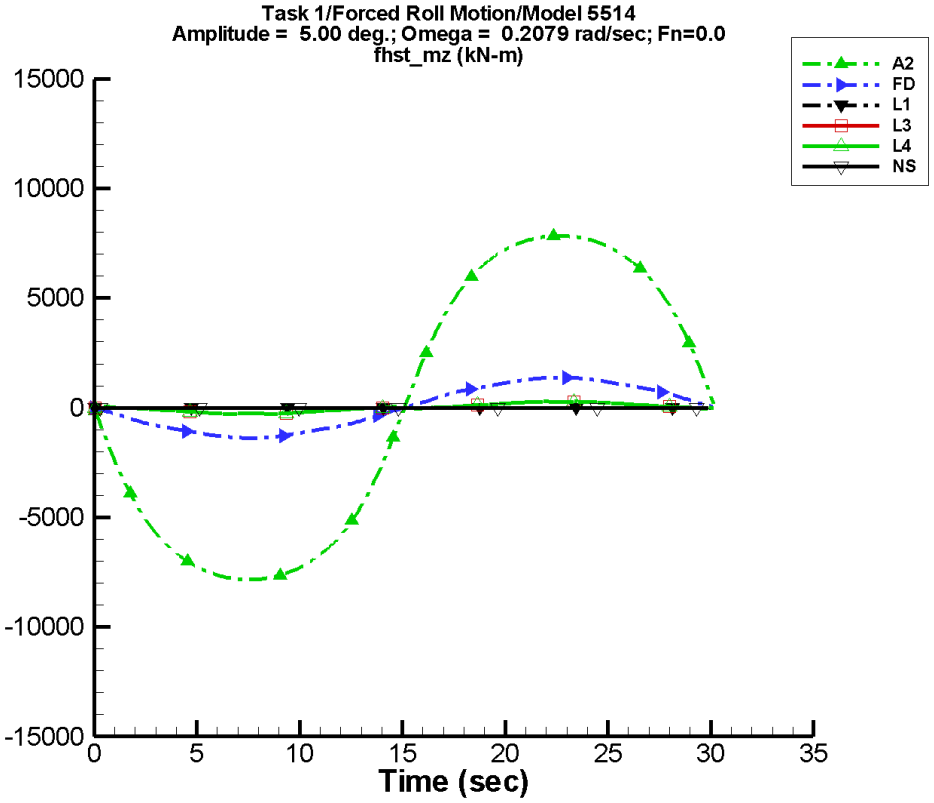
Figure D–360. Time history of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–719. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 1.38E+04 | 1.26E+04 | -113 | 5.79E+04 | 64 |
| FD | 2.12E+04 | 1.40E+03 | -30 | 4.89E+04 | 88 |
| L1 | -5.26E-04 | 3.49E-02 | 179 | 1.00E-03 | -154 |
| L3 | 1.14E+04 | 1.75E+03 | -4 | 4.04E+04 | 81 |
| L4 | 1.14E+04 | 1.75E+03 | -4 | 4.04E+04 | 81 |
| NF | — | — | — | — | — |
| NS | 1.01E+05 | 1.46E+03 | -180 | 4.45E+04 | -90 |

Table D–720. Minimum and maximum of of $M_y^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.32E+04 | 7.43E+05 | -8.20E+04 | 1.50E+05 |
| FD | -3.63E+04 | 9.30E+04 | -3.51E+04 | 7.15E+04 |
| L1 | -3.04E-02 | 3.04E-02 | -3.02E-02 | 3.02E-02 |
| L3 | -3.93E+04 | 7.81E+04 | -3.89E+04 | 6.91E+04 |
| L4 | -3.93E+04 | 7.81E+04 | -3.89E+04 | 6.91E+04 |
| NF | — | — | — | — |
| NS | -23.3 | 1.64E+05 | 216. | 1.63E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

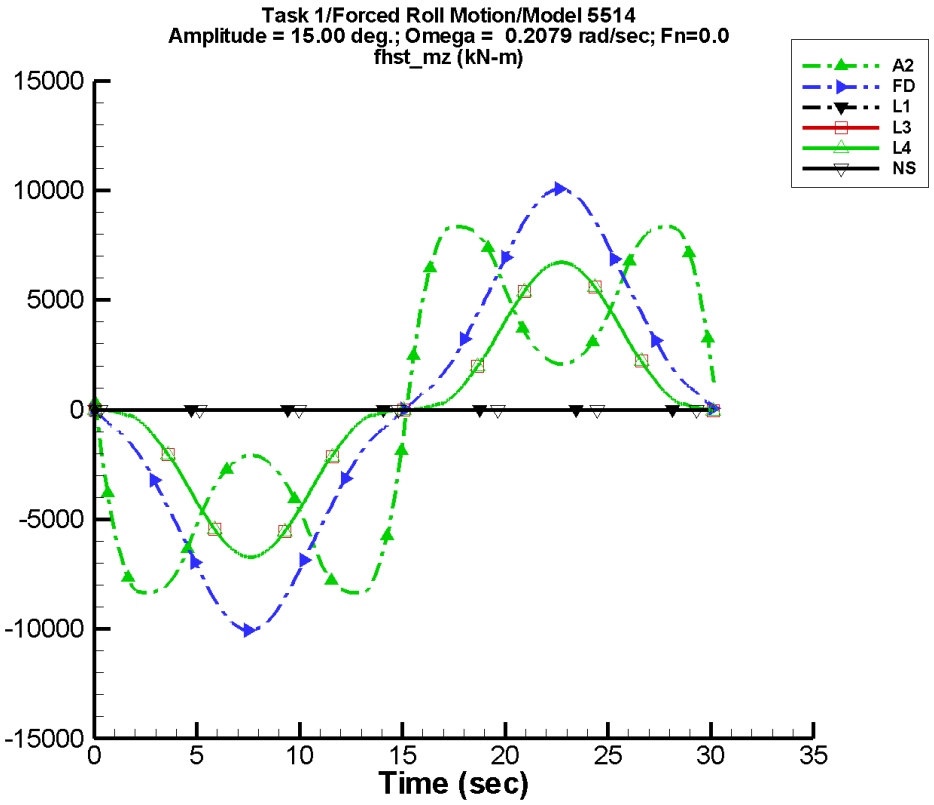
Figure D–361. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–721. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -24.0 | 8.50E+03 | -179 | 132. | -117 |
| FD | 5.82E-02 | 1.35E+03 | 180 | 0.976 | -48 |
| L1 | 2.06E-04 | 4.40E-09 | -69 | 2.06E-04 | -91 |
| L3 | 3.98 | 230. | 179 | 15.1 | 87 |
| L4 | 3.98 | 230. | 179 | 15.1 | 87 |
| NF | — | — | — | — | — |
| NS | -3.17E-04 | 1.07E-02 | 160 | 1.84E-03 | -90 |

Table D–722. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -7.84E+03 | 7.84E+03 | -7.85E+03 | 7.83E+03 |
| FD | -1.38E+03 | 1.38E+03 | -1.38E+03 | 1.38E+03 |
| L1 | 4.35E-10 | 4.12E-04 | 2.60E-07 | 4.12E-04 |
| L3 | -286. | 286. | -279. | 279. |
| L4 | -286. | 286. | -279. | 279. |
| NF | — | — | — | — |
| NS | -7.01E-02 | 7.20E-02 | -2.57E-02 | 2.18E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

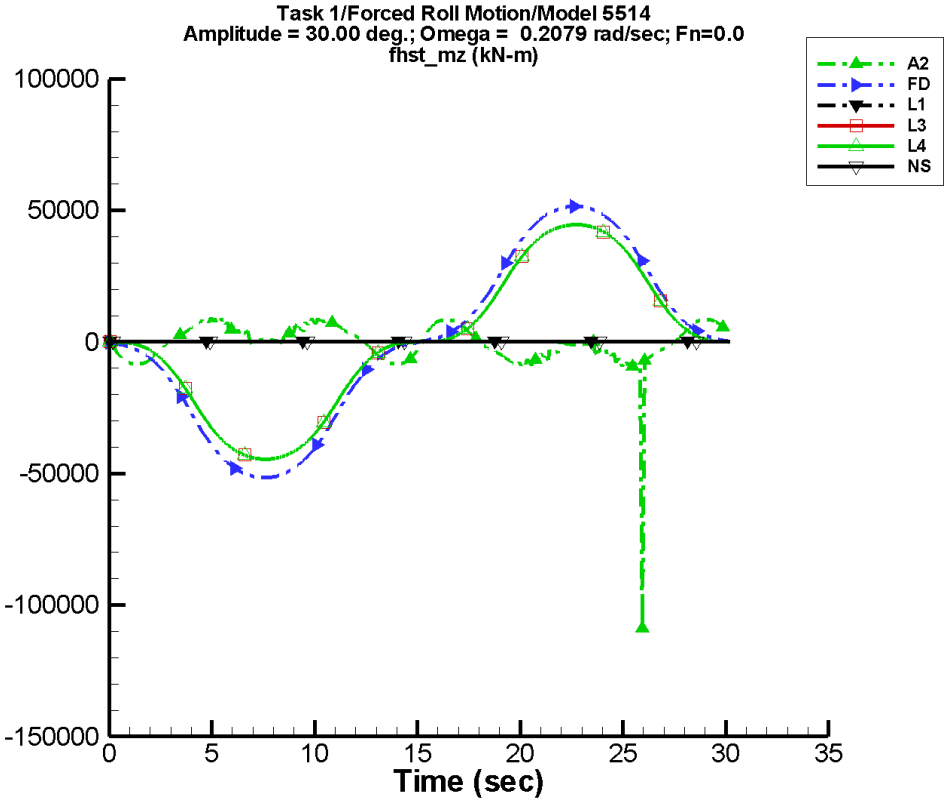
Figure D–362. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–723. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -170. | 6.43E+03 | -176 | 861. | -119 |
| FD | 48.1 | 8.37E+03 | 179 | 242. | 57 |
| L1 | 1.84E-03 | 3.85E-07 | -60 | 1.84E-03 | -91 |
| L3 | 102. | 5.02E+03 | 179 | 401. | 87 |
| L4 | 102. | 5.02E+03 | 179 | 401. | 87 |
| NF | — | — | — | — | — |
| NS | 2.07E-04 | 9.92E-03 | -178 | 4.11E-03 | 69 |

Table D–724. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.35E+03 | 8.35E+03 | -8.34E+03 | 8.34E+03 |
| FD | -1.01E+04 | 1.01E+04 | -1.00E+04 | 1.00E+04 |
| L1 | 3.91E-09 | 3.67E-03 | 2.34E-06 | 3.67E-03 |
| L3 | -6.72E+03 | 6.72E+03 | -6.71E+03 | 6.71E+03 |
| L4 | -6.72E+03 | 6.72E+03 | -6.71E+03 | 6.71E+03 |
| NF | — | — | — | — |
| NS | -6.88E-02 | 8.35E-02 | -2.71E-02 | 3.00E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

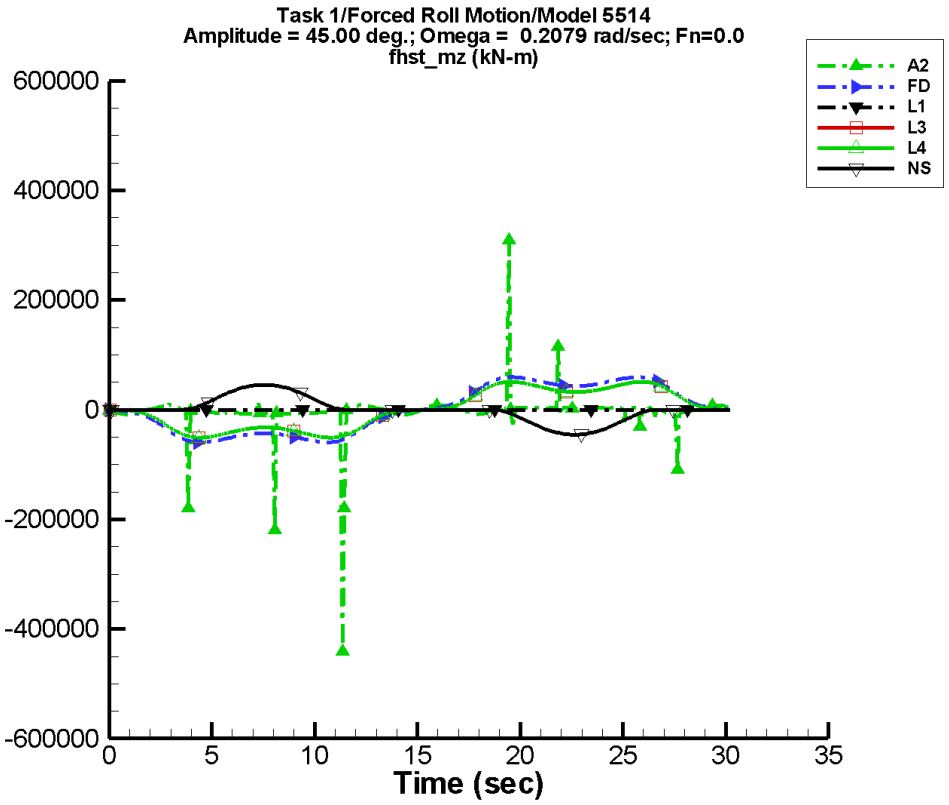
Figure D–363. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–725. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -607. | 4.28E+03 | -15 | 860. | -46 |
| FD | 328. | 4.34E+04 | 179 | 1.64E+03 | 61 |
| L1 | 7.18E-03 | 6.06E-06 | -60 | 7.09E-03 | -91 |
| L3 | 660. | 3.64E+04 | 179 | 2.57E+03 | 87 |
| L4 | 660. | 3.64E+04 | 179 | 2.57E+03 | 87 |
| NF | — | — | — | — | — |
| NS | -8.48E-04 | 2.54E-03 | 25 | 4.74E-03 | 17 |

Table D–726. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.09E+05 | 9.23E+03 | -2.11E+04 | 8.35E+03 |
| FD | -5.16E+04 | 5.16E+04 | -5.15E+04 | 5.15E+04 |
| L1 | 1.56E-08 | 1.42E-02 | 9.36E-06 | 1.42E-02 |
| L3 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| L4 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| NF | — | — | — | — |
| NS | -0.136 | 9.53E-02 | -2.55E-02 | 3.78E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

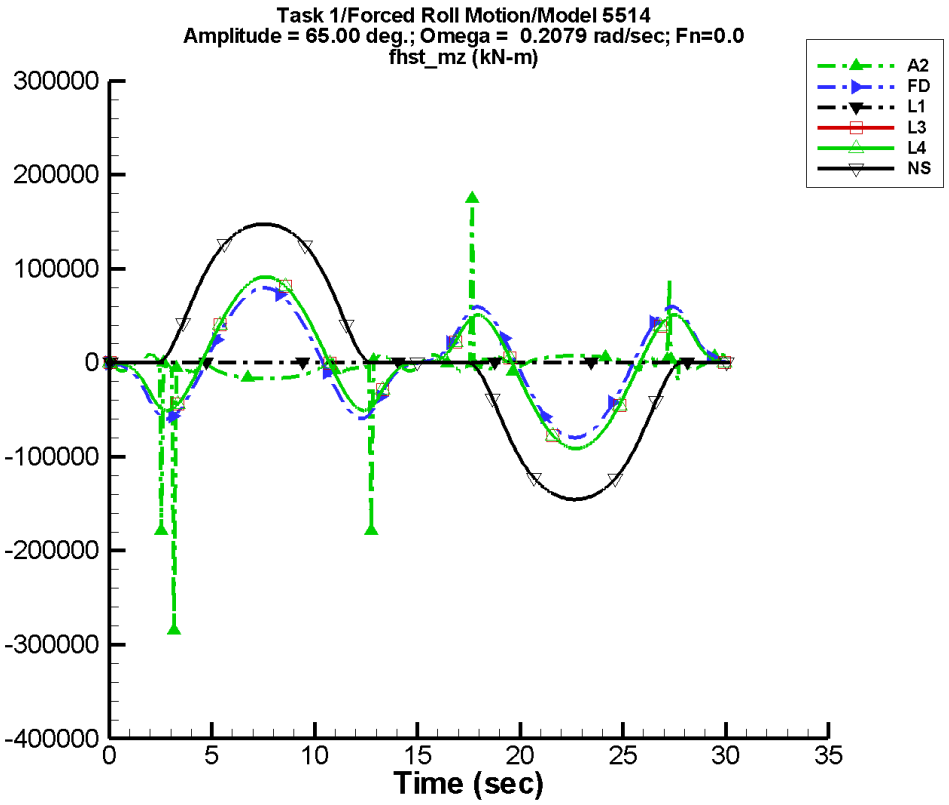
Figure D–364. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–727. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -2.95E+03 | 8.77E+03 | 177 | 6.85E+03 | 4 |
| FD | 74.9 | 5.78E+04 | 180 | 853. | 162 |
| L1 | 1.55E-02 | 3.00E-05 | -60 | 1.50E-02 | -91 |
| L3 | -114. | 4.70E+04 | 179 | 691. | -83 |
| L4 | -114. | 4.70E+04 | 179 | 691. | -83 |
| NF | — | — | — | — | — |
| NS | -0.694 | 2.49E+04 | 0 | 1.01 | 90 |

Table D–728. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -4.41E+05 | 3.10E+05 | -8.27E+04 | 3.95E+04 |
| FD | -5.95E+04 | 5.95E+04 | -5.92E+04 | 5.92E+04 |
| L1 | 3.52E-08 | 3.01E-02 | 2.11E-05 | 3.01E-02 |
| L3 | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |
| L4 | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |
| NF | — | — | — | — |
| NS | -4.56E+04 | 4.55E+04 | -4.52E+04 | 4.52E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

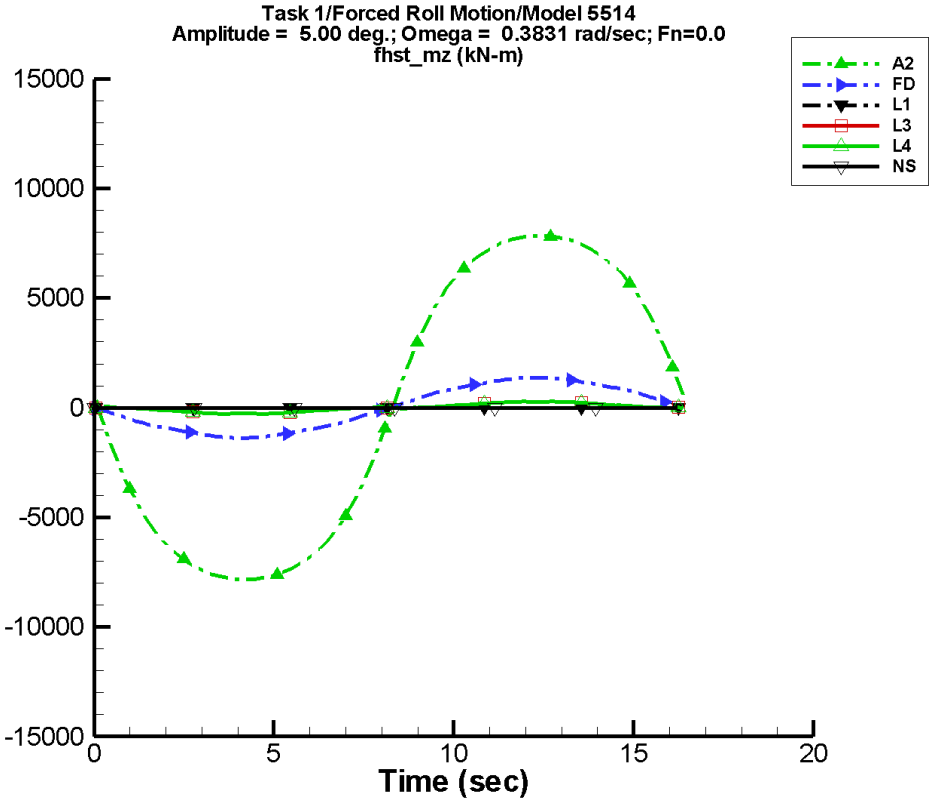
Figure D–365. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–729. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -2.85E+03 | 9.26E+03 | -176 | 2.00E+03 | 86 |
| FD | -1.35E+03 | 1.86E+04 | -15 | 8.12E+03 | -129 |
| L1 | 2.96E-02 | 1.24E-04 | -61 | 2.77E-02 | -91 |
| L3 | -3.34E+03 | 3.10E+04 | 0 | 1.33E+04 | -92 |
| L4 | -3.34E+03 | 3.10E+04 | 0 | 1.33E+04 | -92 |
| NF | — | — | — | — | — |
| NS | 663. | 1.12E+05 | 0 | 694. | -90 |

Table D–730. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.85E+05 | 1.75E+05 | -4.75E+04 | 2.01E+04 |
| FD | -7.96E+04 | 7.96E+04 | -7.91E+04 | 7.91E+04 |
| L1 | 7.37E-08 | 5.57E-02 | 4.42E-05 | 5.57E-02 |
| L3 | -9.15E+04 | 9.15E+04 | -9.13E+04 | 9.13E+04 |
| L4 | -9.15E+04 | 9.15E+04 | -9.13E+04 | 9.13E+04 |
| NF | — | — | — | — |
| NS | -1.45E+05 | 1.48E+05 | -1.45E+05 | 1.48E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

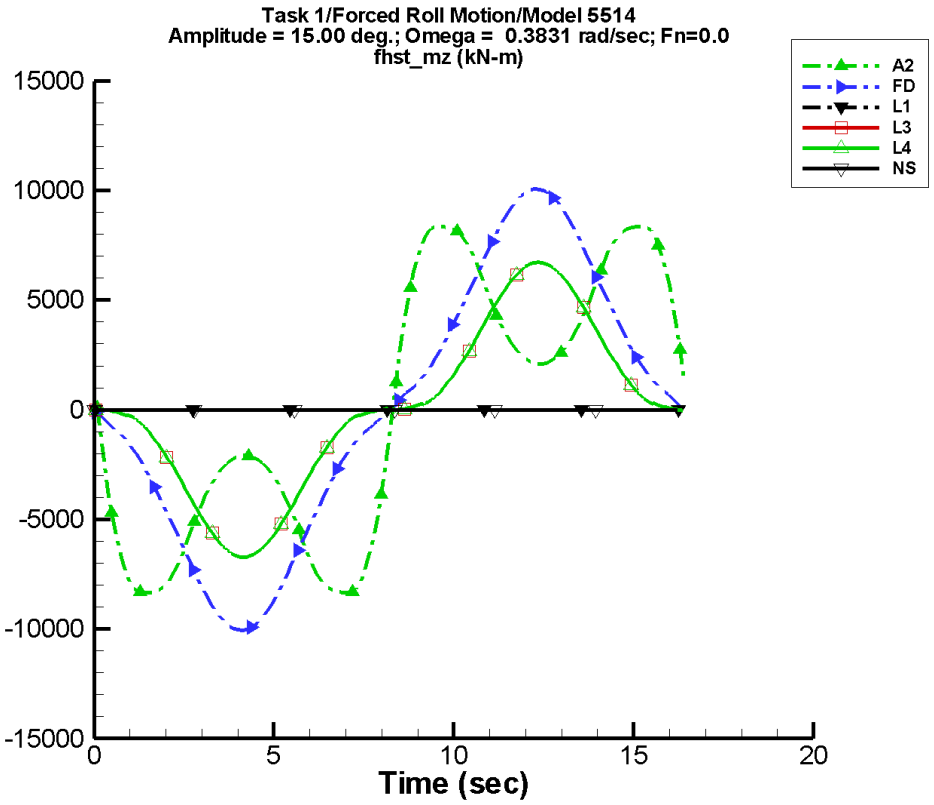
Figure D–366. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–731. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -22.5 | 8.50E+03 | 178 | 133. | -121 |
| FD | 0.534 | 1.35E+03 | -180 | 1.25 | 155 |
| L1 | 2.06E-04 | 7.64E-09 | -7 | 2.06E-04 | -93 |
| L3 | 4.35 | 227. | 177 | 7.46 | 39 |
| L4 | 4.35 | 227. | 177 | 7.46 | 39 |
| NF | — | — | — | — | — |
| NS | -7.88E-04 | 5.55E-03 | 172 | 2.06E-03 | -20 |

Table D–732. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -7.84E+03 | 7.84E+03 | -7.86E+03 | 7.82E+03 |
| FD | -1.38E+03 | 1.38E+03 | -1.37E+03 | 1.37E+03 |
| L1 | 3.27E-09 | 4.12E-04 | -2.35E-07 | 4.11E-04 |
| L3 | -284. | 286. | -272. | 275. |
| L4 | -284. | 286. | -272. | 275. |
| NF | — | — | — | — |
| NS | -7.12E-02 | 8.43E-02 | -3.12E-02 | 1.69E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

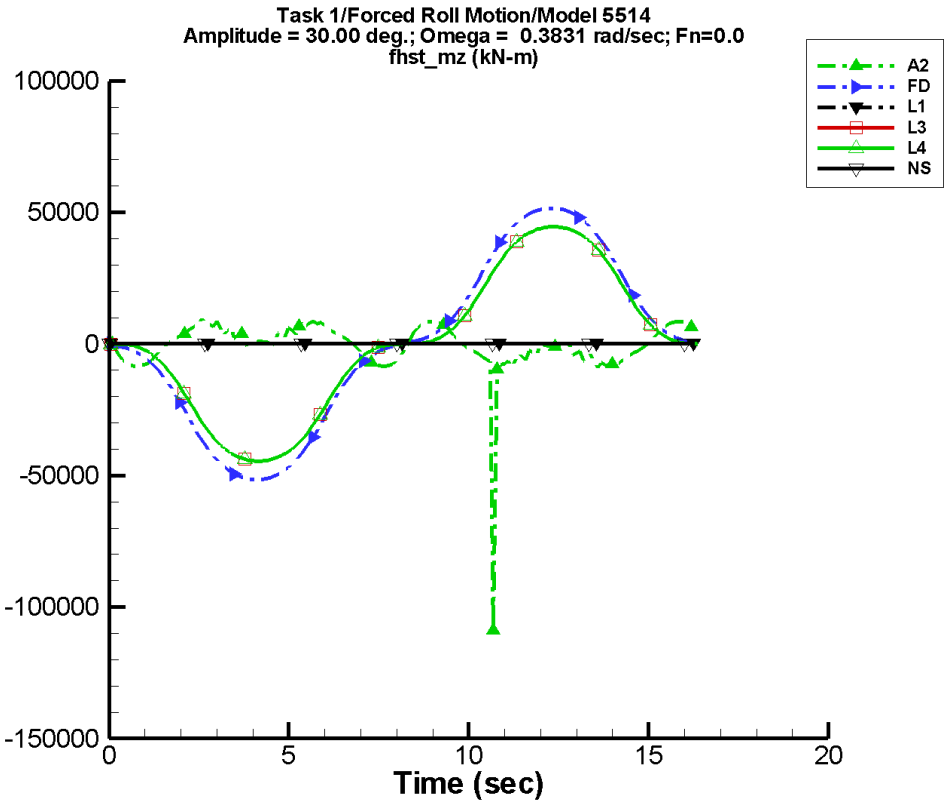
Figure D–367. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–733. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -155. | 6.40E+03 | -177 | 890. | -120 |
| FD | 48.7 | 8.40E+03 | 179 | 330. | 76 |
| L1 | 1.84E-03 | 2.94E-07 | -14 | 1.84E-03 | -93 |
| L3 | 98.2 | 4.93E+03 | 177 | 187. | 28 |
| L4 | 98.2 | 4.93E+03 | 177 | 187. | 28 |
| NF | — | — | — | — | — |
| NS | 1.28E-04 | 6.47E-03 | -157 | 1.75E-03 | -29 |

Table D–734. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.34E+03 | 8.35E+03 | -8.30E+03 | 8.30E+03 |
| FD | -1.01E+04 | 1.01E+04 | -9.97E+03 | 9.97E+03 |
| L1 | 2.93E-08 | 3.67E-03 | -2.08E-06 | 3.66E-03 |
| L3 | -6.72E+03 | 6.72E+03 | -6.69E+03 | 6.69E+03 |
| L4 | -6.72E+03 | 6.72E+03 | -6.69E+03 | 6.69E+03 |
| NF | — | — | — | — |
| NS | -7.90E-02 | 8.66E-02 | -2.72E-02 | 2.51E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

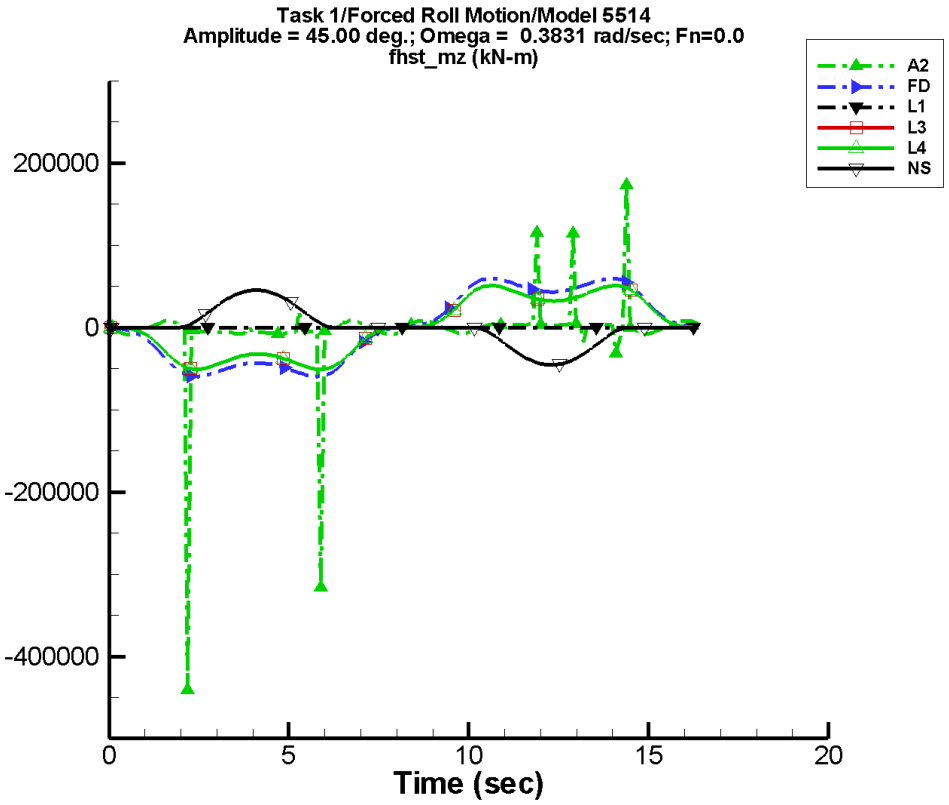
Figure D–368. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–735. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -857. | 4.62E+03 | 0 | 1.19E+03 | -161 |
| FD | 306. | 4.37E+04 | 179 | 2.16E+03 | 75 |
| L1 | 7.18E-03 | 3.88E-06 | -17 | 7.10E-03 | -93 |
| L3 | 665. | 3.58E+04 | 177 | 1.27E+03 | 31 |
| L4 | 665. | 3.58E+04 | 177 | 1.27E+03 | 31 |
| NF | — | — | — | — | — |
| NS | 1.25E-03 | 5.18E-03 | -13 | 4.36E-03 | 105 |

Table D–736. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.09E+05 | 9.75E+03 | -2.05E+04 | 7.83E+03 |
| FD | -5.16E+04 | 5.16E+04 | -5.13E+04 | 5.13E+04 |
| L1 | 1.17E-07 | 1.42E-02 | -7.88E-06 | 1.42E-02 |
| L3 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| L4 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| NF | — | — | — | — |
| NS | -8.72E-02 | 8.83E-02 | -4.18E-02 | 3.34E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

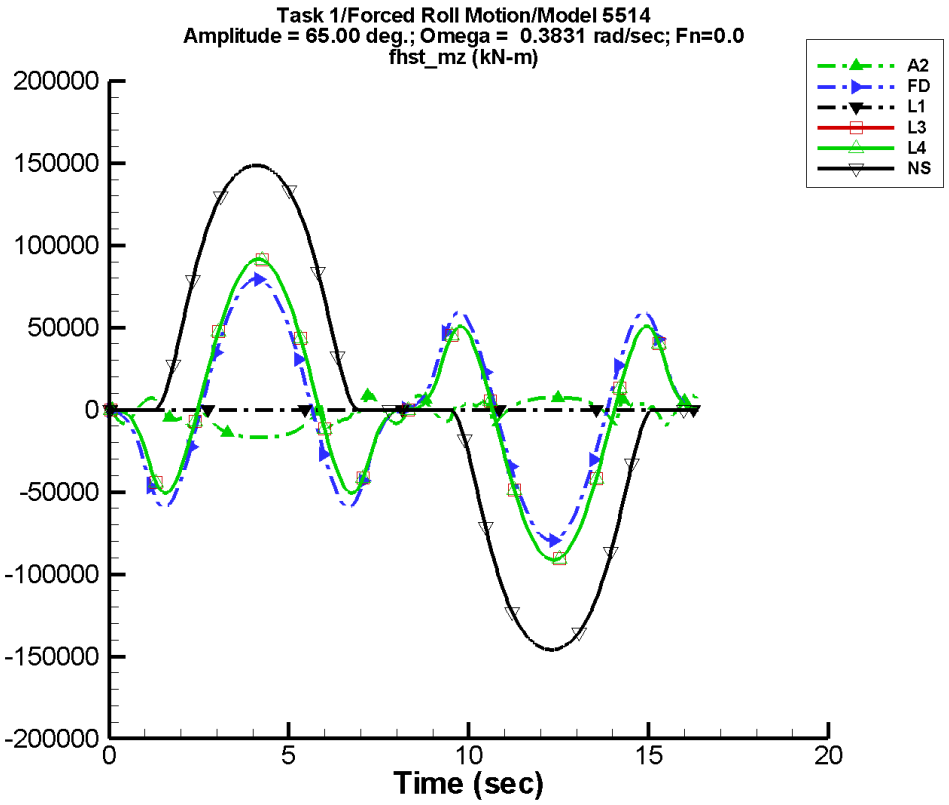
Figure D–369. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–737. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -1.65E+03 | 1.11E+04 | 173 | 1.25E+03 | -141 |
| FD | -149. | 5.78E+04 | 179 | 758. | -81 |
| L1 | 1.55E-02 | 1.82E-05 | -18 | 1.51E-02 | -93 |
| L3 | 12.7 | 4.71E+04 | 178 | 741. | 119 |
| L4 | 12.7 | 4.71E+04 | 178 | 741. | 119 |
| NF | — | — | — | — | — |
| NS | 0.918 | 2.49E+04 | 0 | 1.34 | -90 |

Table D–738. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -4.41E+05 | 1.73E+05 | -5.95E+04 | 1.81E+04 |
| FD | -5.95E+04 | 5.95E+04 | -5.84E+04 | 5.84E+04 |
| L1 | 2.65E-07 | 3.01E-02 | -1.60E-05 | 3.00E-02 |
| L3 | -5.10E+04 | 5.10E+04 | -5.04E+04 | 5.05E+04 |
| L4 | -5.10E+04 | 5.10E+04 | -5.04E+04 | 5.05E+04 |
| NF | — | — | — | — |
| NS | -4.55E+04 | 4.55E+04 | -4.52E+04 | 4.52E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

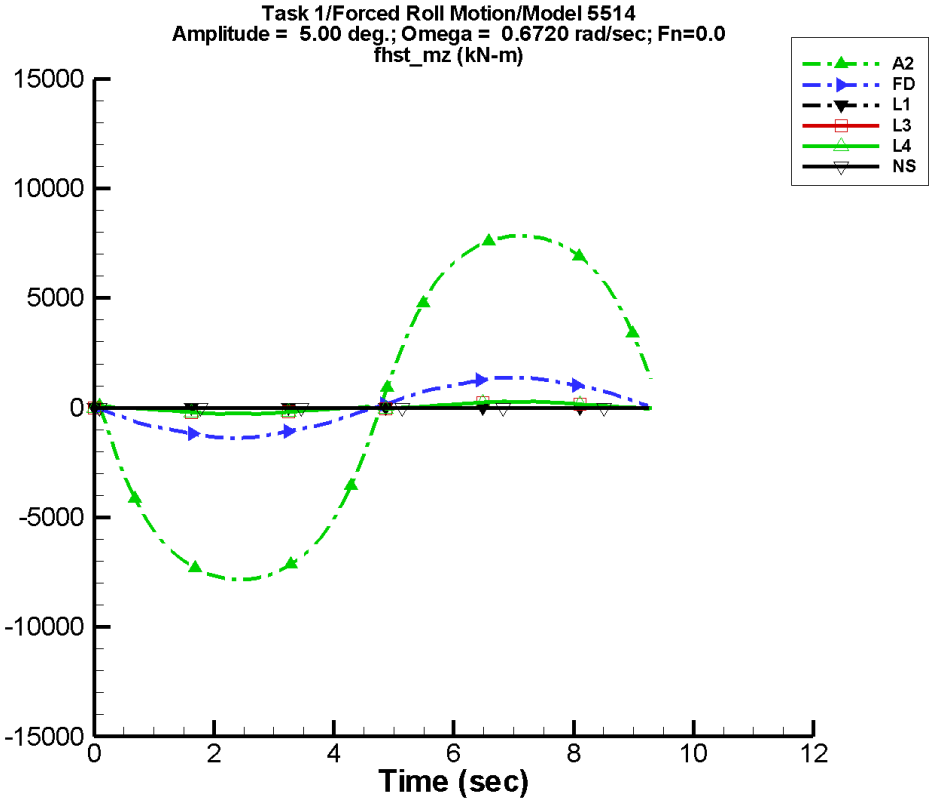
Figure D–370. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–739. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -2.25E+03 | 7.16E+03 | 177 | 3.02E+03 | 77 |
| FD | -1.49E+03 | 1.93E+04 | -9 | 1.13E+04 | -105 |
| L1 | 2.96E-02 | 7.52E-05 | -18 | 2.79E-02 | -92 |
| L3 | -3.09E+03 | 2.82E+04 | -12 | 6.21E+03 | -164 |
| L4 | -3.09E+03 | 2.82E+04 | -12 | 6.21E+03 | -164 |
| NF | — | — | — | — | — |
| NS | 668. | 1.13E+05 | 0 | 743. | -90 |

Table D–740. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.69E+04 | 9.79E+03 | -1.67E+04 | 7.16E+03 |
| FD | -7.96E+04 | 7.96E+04 | -7.77E+04 | 7.77E+04 |
| L1 | 5.53E-07 | 5.57E-02 | -2.67E-05 | 5.56E-02 |
| L3 | -9.14E+04 | 9.14E+04 | -9.08E+04 | 9.07E+04 |
| L4 | -9.14E+04 | 9.14E+04 | -9.08E+04 | 9.07E+04 |
| NF | — | — | — | — |
| NS | -1.46E+05 | 1.49E+05 | -1.46E+05 | 1.48E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

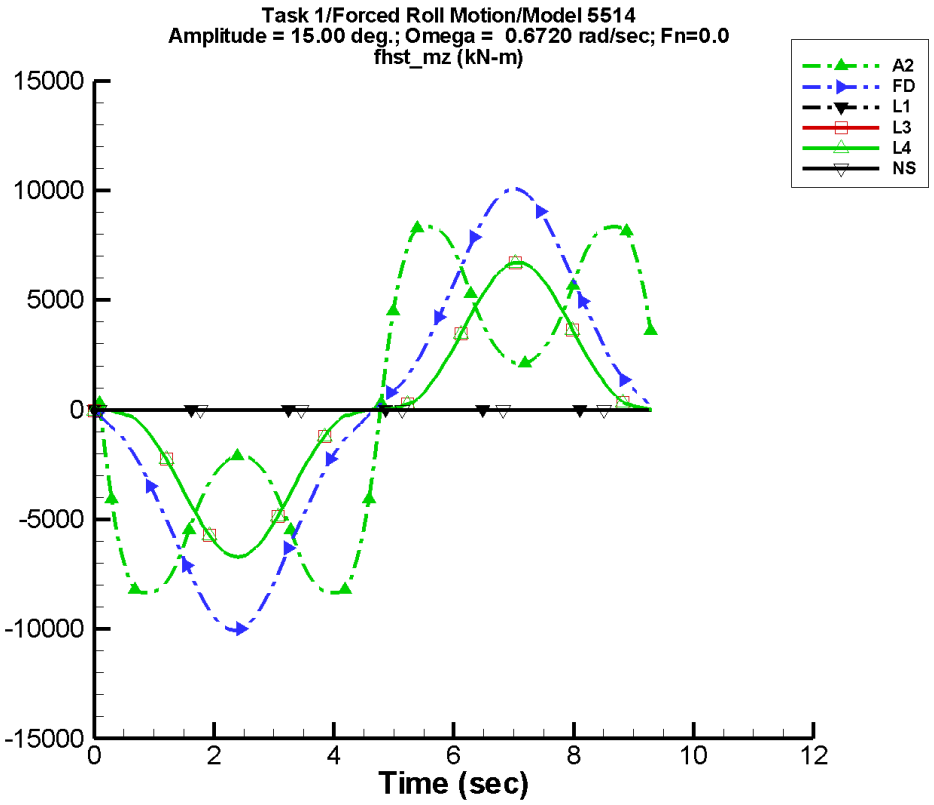
Figure D–371. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–741. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -42.7 | 8.54E+03 | 177 | 97.3 | -141 |
| FD | 0.549 | 1.35E+03 | 180 | 1.29 | -135 |
| L1 | 2.06E-04 | 1.94E-08 | -3 | 2.06E-04 | -95 |
| L3 | 3.92 | 226. | 176 | 7.47 | 39 |
| L4 | 3.92 | 226. | 176 | 7.47 | 39 |
| NF | — | — | — | — | — |
| NS | -2.89E-04 | 1.07E-02 | 175 | 5.51E-03 | -46 |

Table D–742. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -7.83E+03 | 7.83E+03 | -7.79E+03 | 7.79E+03 |
| FD | -1.38E+03 | 1.38E+03 | -1.36E+03 | 1.37E+03 |
| L1 | 5.72E-09 | 4.12E-04 | 1.80E-07 | 4.09E-04 |
| L3 | -283. | 283. | -267. | 268. |
| L4 | -283. | 283. | -267. | 268. |
| NF | — | — | — | — |
| NS | -0.104 | 7.59E-02 | -3.05E-02 | 2.54E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

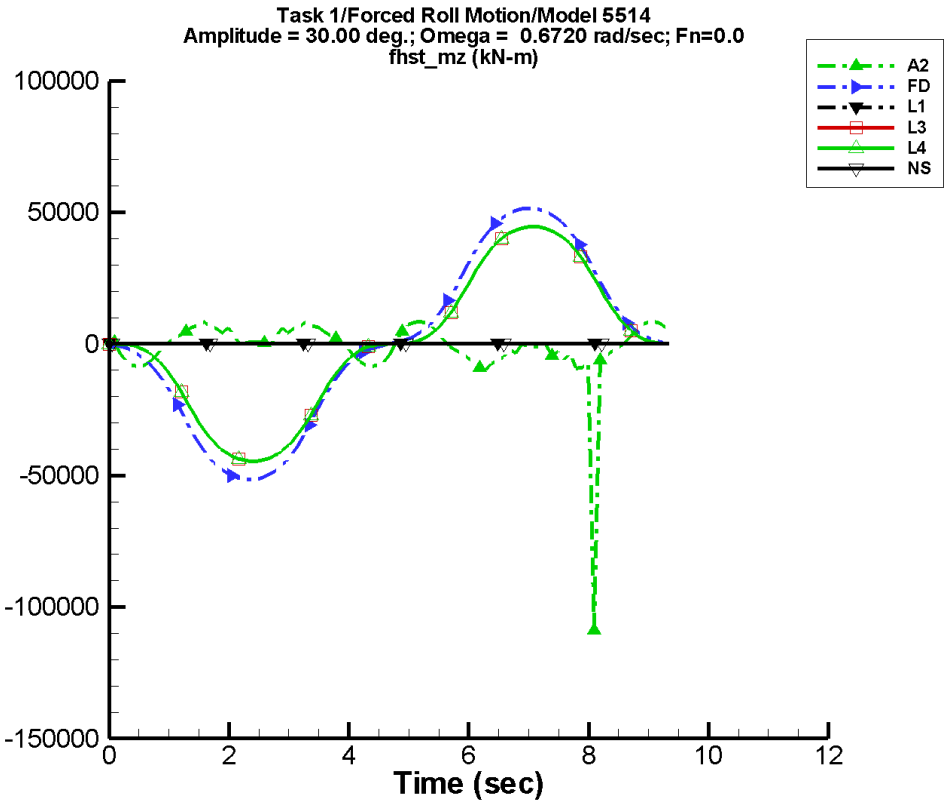
Figure D–372. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–743. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -289. | 6.68E+03 | -179 | 650. | -140 |
| FD | 126. | 8.48E+03 | 179 | 234. | 147 |
| L1 | 1.84E-03 | 5.04E-07 | -1 | 1.84E-03 | -95 |
| L3 | 102. | 4.92E+03 | 176 | 193. | 24 |
| L4 | 102. | 4.92E+03 | 176 | 193. | 24 |
| NF | — | — | — | — | — |
| NS | -3.95E-03 | 5.37E-03 | -166 | 3.11E-03 | -120 |

Table D–744. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.35E+03 | 8.35E+03 | -8.15E+03 | 8.15E+03 |
| FD | -1.01E+04 | 1.01E+04 | -9.78E+03 | 9.86E+03 |
| L1 | 5.15E-08 | 3.67E-03 | 1.73E-06 | 3.64E-03 |
| L3 | -6.72E+03 | 6.72E+03 | -6.63E+03 | 6.63E+03 |
| L4 | -6.72E+03 | 6.72E+03 | -6.63E+03 | 6.63E+03 |
| NF | — | — | — | — |
| NS | -7.34E-02 | 7.70E-02 | -2.57E-02 | 1.85E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

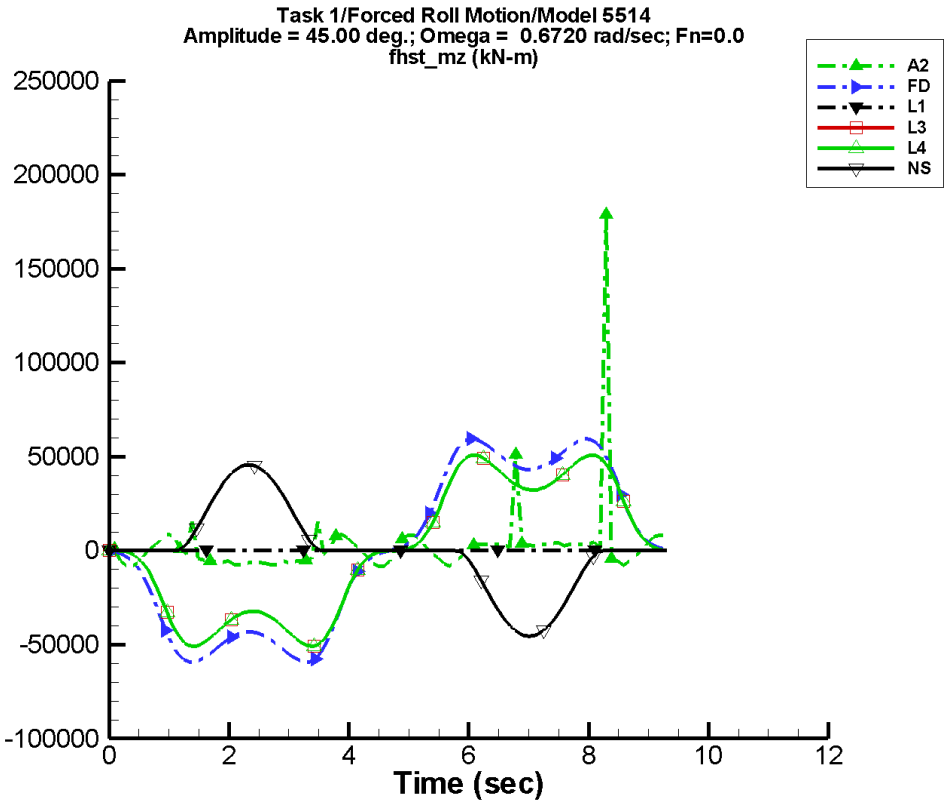
Figure D–373. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–745. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -1.40E+03 | 5.50E+03 | -23 | 1.99E+03 | -11 |
| FD | 785. | 4.40E+04 | 178 | 1.53E+03 | 141 |
| L1 | 7.18E-03 | 6.29E-06 | -1 | 7.10E-03 | -95 |
| L3 | 640. | 3.59E+04 | 176 | 1.25E+03 | 31 |
| L4 | 640. | 3.59E+04 | 176 | 1.25E+03 | 31 |
| NF | — | — | — | — | — |
| NS | -2.70E-05 | 4.10E-03 | 20 | 3.99E-03 | 121 |

Table D–746. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.09E+05 | 8.41E+03 | -1.97E+04 | 7.70E+03 |
| FD | -5.16E+04 | 5.16E+04 | -5.08E+04 | 5.10E+04 |
| L1 | 2.06E-07 | 1.42E-02 | 8.35E-06 | 1.41E-02 |
| L3 | -4.46E+04 | 4.45E+04 | -4.43E+04 | 4.43E+04 |
| L4 | -4.46E+04 | 4.45E+04 | -4.43E+04 | 4.43E+04 |
| NF | — | — | — | — |
| NS | -0.103 | 8.20E-02 | -4.05E-02 | 2.54E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

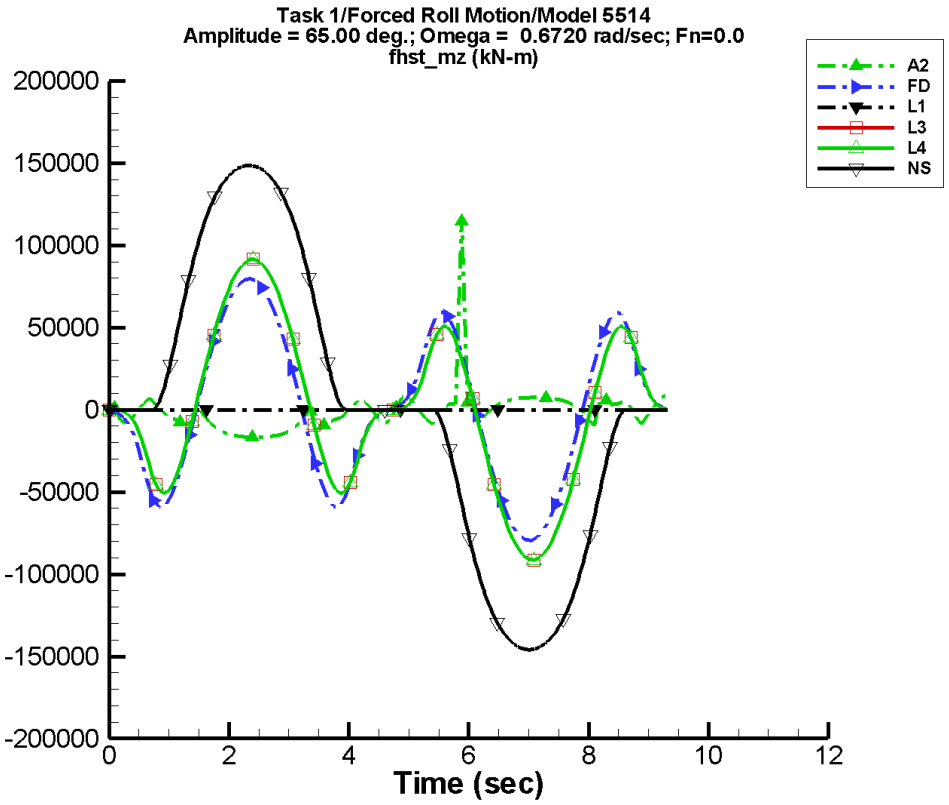
Figure D–374. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–747. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 2.11E+03 | 6.35E+03 | 154 | 3.13E+03 | -178 |
| FD | -319. | 5.69E+04 | -180 | 950. | 28 |
| L1 | 1.55E-02 | 2.94E-05 | -1 | 1.51E-02 | -94 |
| L3 | -238. | 4.76E+04 | 178 | 1.30E+03 | 130 |
| L4 | -238. | 4.76E+04 | 178 | 1.30E+03 | 130 |
| NF | — | — | — | — | — |
| NS | -0.384 | 2.49E+04 | 0 | 0.607 | 93 |

Table D–748. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.39E+03 | 1.79E+05 | -6.71E+03 | 2.27E+04 |
| FD | -5.95E+04 | 5.95E+04 | -5.61E+04 | 5.61E+04 |
| L1 | 4.63E-07 | 3.01E-02 | 2.41E-05 | 2.99E-02 |
| L3 | -5.09E+04 | 5.10E+04 | -5.01E+04 | 4.96E+04 |
| L4 | -5.09E+04 | 5.10E+04 | -5.01E+04 | 4.96E+04 |
| NF | — | — | — | — |
| NS | -4.55E+04 | 4.55E+04 | -4.52E+04 | 4.52E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

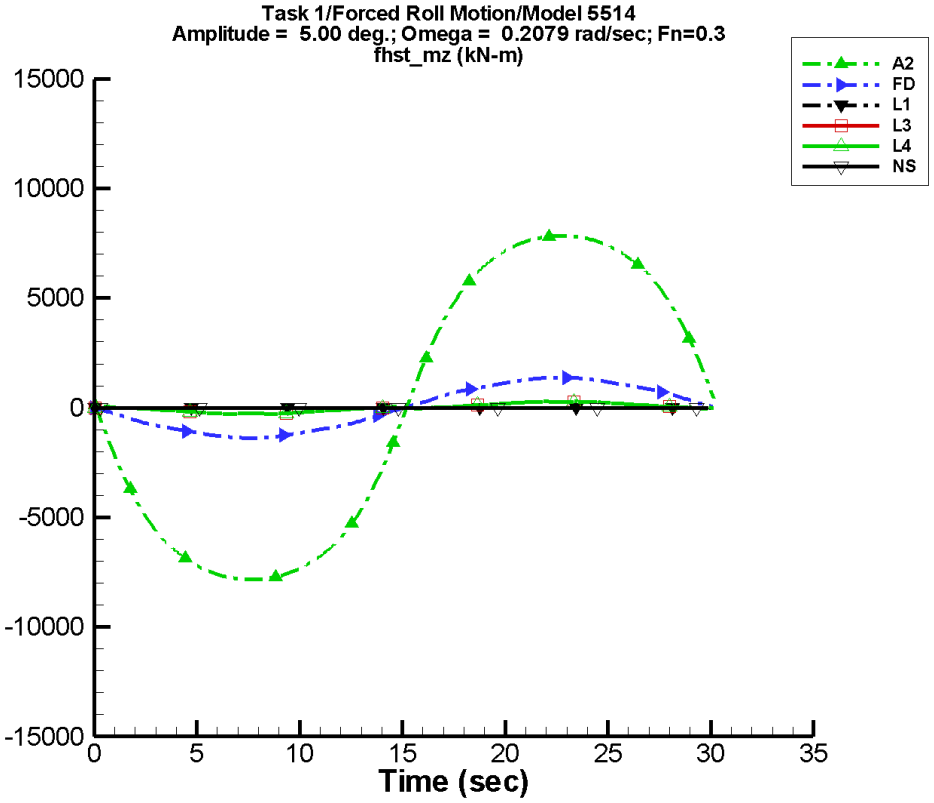
Figure D–375. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–749. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -931. | 8.90E+03 | -173 | 3.84E+03 | 41 |
| FD | -4.15E+03 | 2.31E+04 | -18 | 7.94E+03 | -29 |
| L1 | 2.96E-02 | 1.19E-04 | -1 | 2.80E-02 | -94 |
| L3 | -3.27E+03 | 2.79E+04 | -13 | 6.55E+03 | -168 |
| L4 | -3.27E+03 | 2.79E+04 | -13 | 6.55E+03 | -168 |
| NF | — | — | — | — | — |
| NS | 677. | 1.13E+05 | 0 | 748. | -90 |

Table D–750. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.68E+04 | 1.15E+05 | -1.65E+04 | 1.54E+04 |
| FD | -7.96E+04 | 7.96E+04 | -7.47E+04 | 7.34E+04 |
| L1 | 9.67E-07 | 5.57E-02 | 7.13E-05 | 5.54E-02 |
| L3 | -9.14E+04 | 9.14E+04 | -8.92E+04 | 8.93E+04 |
| L4 | -9.14E+04 | 9.14E+04 | -8.92E+04 | 8.93E+04 |
| NF | — | — | — | — |
| NS | -1.46E+05 | 1.49E+05 | -1.46E+05 | 1.48E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

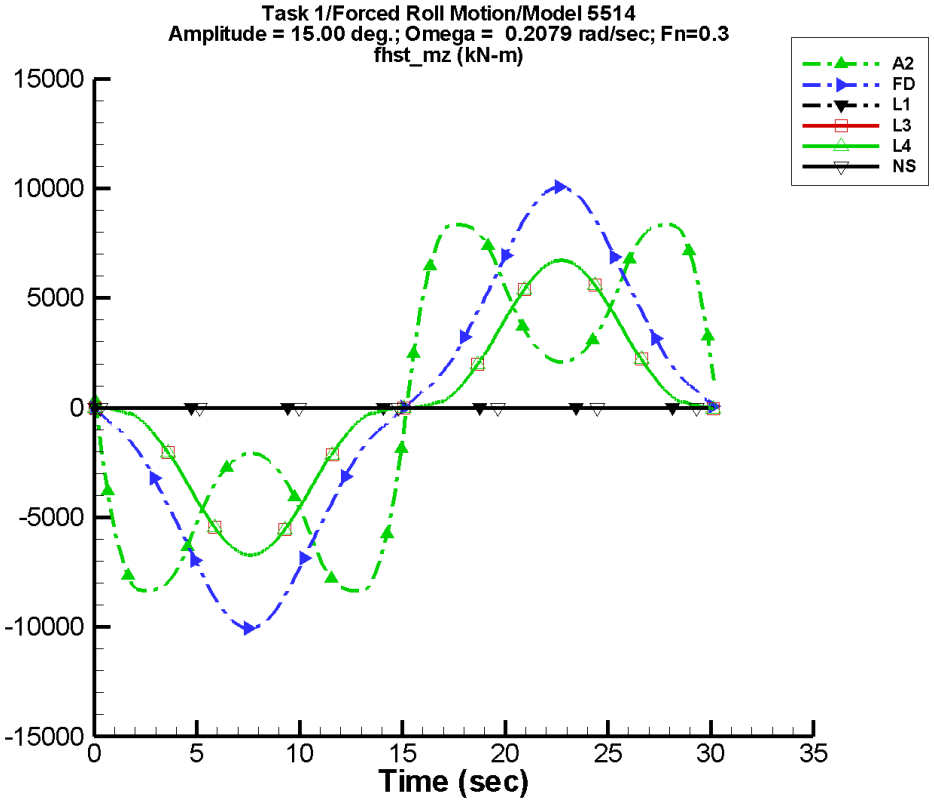
Figure D–376. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–751. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -24.7 | 8.50E+03 | 179 | 129. | -120 |
| FD | 5.52E-02 | 1.35E+03 | 180 | 0.971 | -48 |
| L1 | 2.06E-04 | 4.40E-09 | -69 | 2.06E-04 | -91 |
| L3 | 3.95 | 230. | 179 | 15.1 | 87 |
| L4 | 3.95 | 230. | 179 | 15.1 | 87 |
| NF | — | — | — | — | — |
| NS | -3.17E-04 | 1.07E-02 | 160 | 1.84E-03 | -90 |

Table D–752. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -7.84E+03 | 7.84E+03 | -7.84E+03 | 7.83E+03 |
| FD | -1.38E+03 | 1.38E+03 | -1.38E+03 | 1.38E+03 |
| L1 | 4.35E-10 | 4.12E-04 | 2.60E-07 | 4.12E-04 |
| L3 | -287. | 286. | -279. | 279. |
| L4 | -287. | 286. | -279. | 279. |
| NF | — | — | — | — |
| NS | -7.01E-02 | 7.20E-02 | -2.57E-02 | 2.18E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

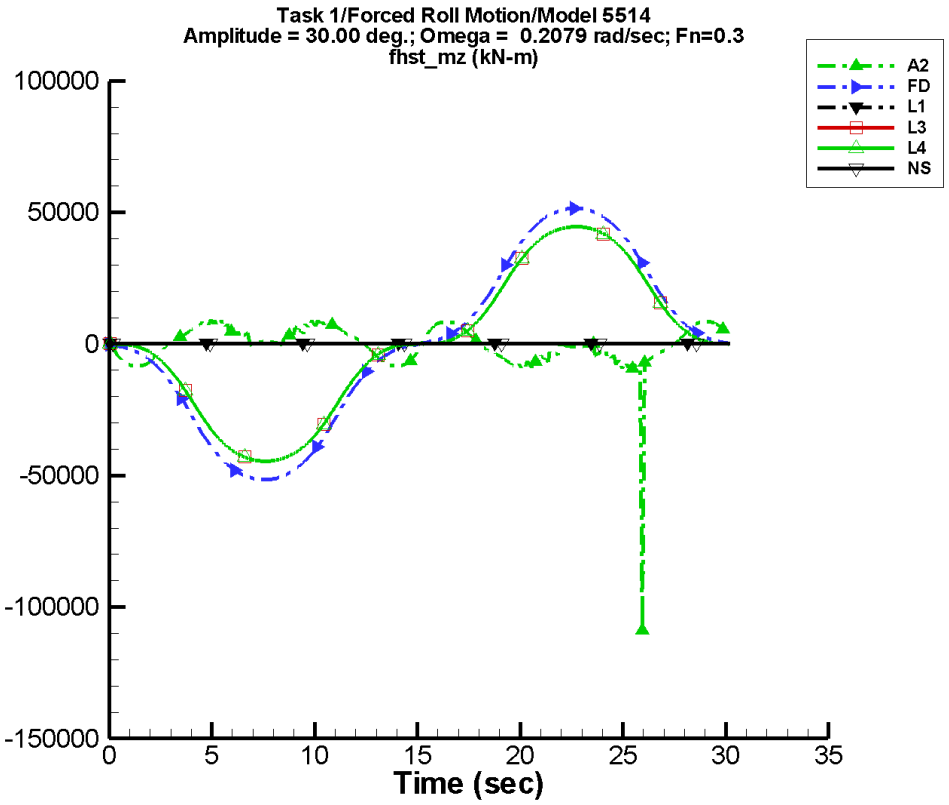
Figure D–377. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–753. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -170. | 6.43E+03 | -176 | 861. | -119 |
| FD | 48.1 | 8.37E+03 | 179 | 242. | 57 |
| L1 | 1.84E-03 | 3.85E-07 | -60 | 1.84E-03 | -91 |
| L3 | 102. | 5.02E+03 | 179 | 401. | 87 |
| L4 | 102. | 5.02E+03 | 179 | 401. | 87 |
| NF | — | — | — | — | — |
| NS | 2.07E-04 | 9.92E-03 | -178 | 4.11E-03 | 69 |

Table D–754. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.35E+03 | 8.35E+03 | -8.34E+03 | 8.34E+03 |
| FD | -1.01E+04 | 1.01E+04 | -1.00E+04 | 1.00E+04 |
| L1 | 3.91E-09 | 3.67E-03 | 2.34E-06 | 3.67E-03 |
| L3 | -6.72E+03 | 6.72E+03 | -6.71E+03 | 6.71E+03 |
| L4 | -6.72E+03 | 6.72E+03 | -6.71E+03 | 6.71E+03 |
| NF | — | — | — | — |
| NS | -6.88E-02 | 8.35E-02 | -2.71E-02 | 3.00E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

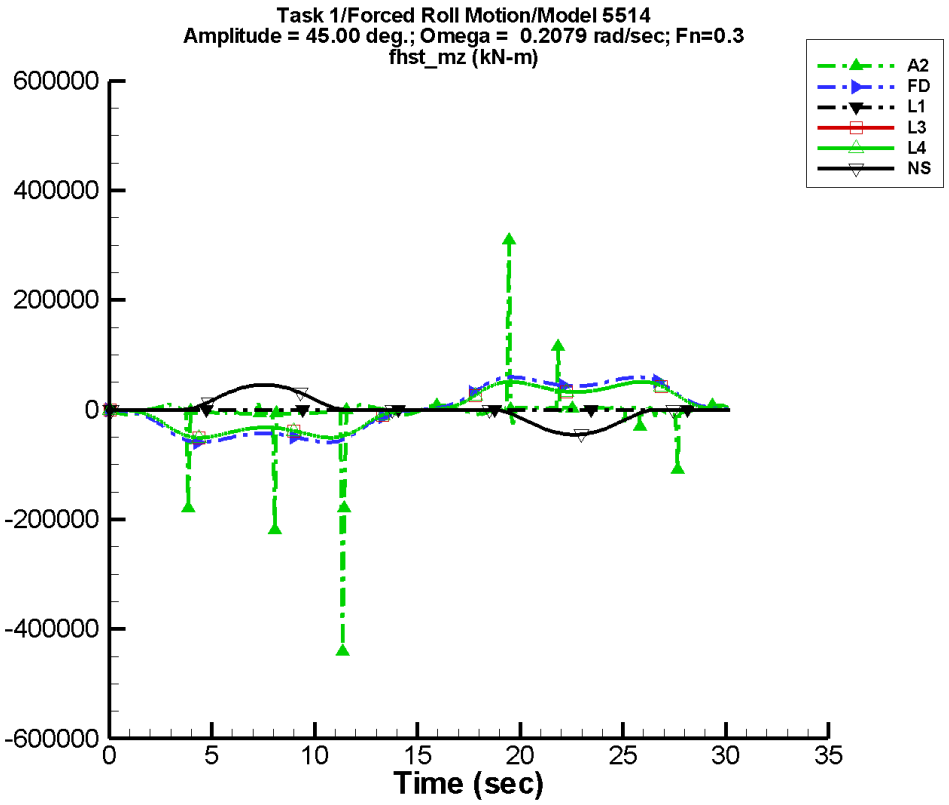
Figure D–378. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–755. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -607. | 4.28E+03 | -15 | 860. | -46 |
| FD | 328. | 4.34E+04 | 179 | 1.64E+03 | 61 |
| L1 | 7.18E-03 | 6.06E-06 | -60 | 7.09E-03 | -91 |
| L3 | 660. | 3.64E+04 | 179 | 2.57E+03 | 87 |
| L4 | 660. | 3.64E+04 | 179 | 2.57E+03 | 87 |
| NF | — | — | — | — | — |
| NS | -8.48E-04 | 2.54E-03 | 25 | 4.74E-03 | 17 |

Table D–756. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.09E+05 | 9.23E+03 | -2.11E+04 | 8.35E+03 |
| FD | -5.16E+04 | 5.16E+04 | -5.15E+04 | 5.15E+04 |
| L1 | 1.56E-08 | 1.42E-02 | 9.36E-06 | 1.42E-02 |
| L3 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| L4 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| NF | — | — | — | — |
| NS | -0.136 | 9.53E-02 | -2.55E-02 | 3.78E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

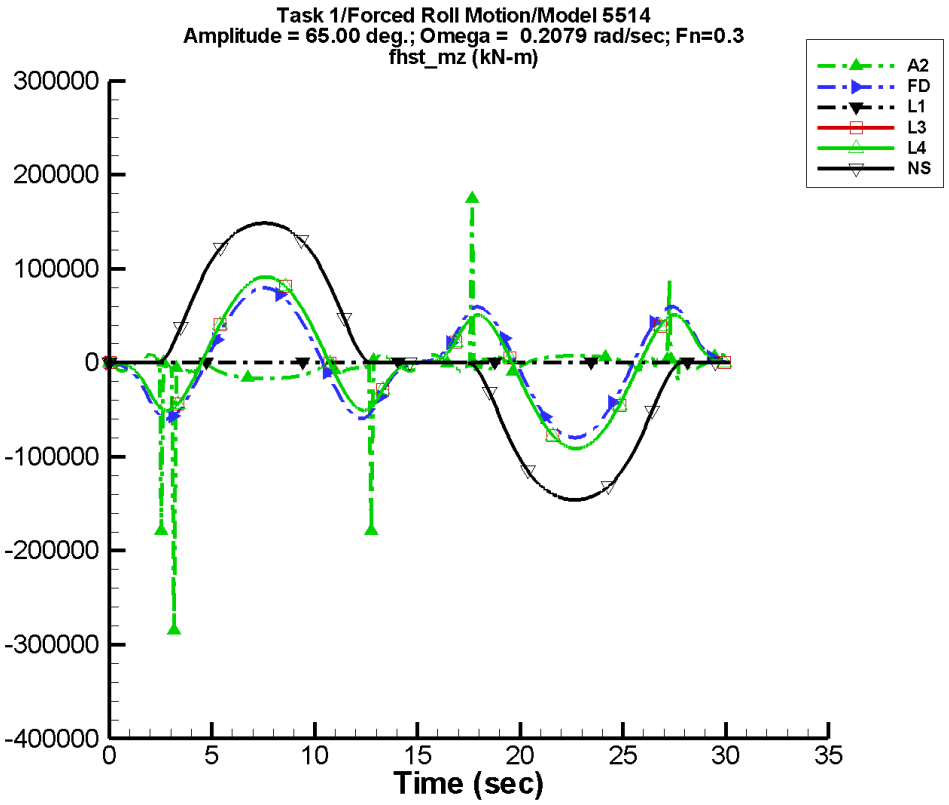
Figure D–379. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–757. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -2.95E+03 | 8.77E+03 | 177 | 6.85E+03 | 4 |
| FD | 74.9 | 5.78E+04 | 180 | 853. | 162 |
| L1 | 1.55E-02 | 3.00E-05 | -60 | 1.50E-02 | -91 |
| L3 | -114. | 4.70E+04 | 179 | 691. | -83 |
| L4 | -114. | 4.70E+04 | 179 | 691. | -83 |
| NF | — | — | — | — | — |
| NS | -0.694 | 2.49E+04 | 0 | 1.01 | 90 |

Table D–758. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -4.41E+05 | 3.10E+05 | -8.27E+04 | 3.95E+04 |
| FD | -5.95E+04 | 5.95E+04 | -5.92E+04 | 5.92E+04 |
| L1 | 3.52E-08 | 3.01E-02 | 2.11E-05 | 3.01E-02 |
| L3 | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |
| L4 | -5.10E+04 | 5.10E+04 | -5.08E+04 | 5.08E+04 |
| NF | — | — | — | — |
| NS | -4.56E+04 | 4.55E+04 | -4.52E+04 | 4.52E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

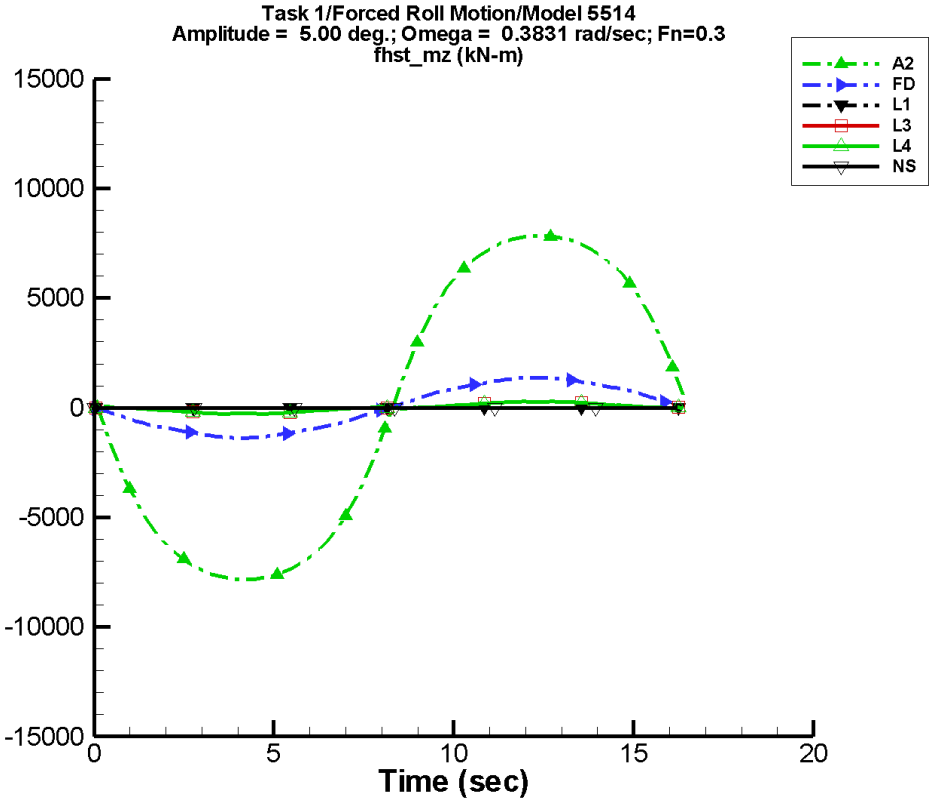
Figure D–380. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–759. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -2.85E+03 | 9.26E+03 | -176 | 2.00E+03 | 86 |
| FD | -1.35E+03 | 1.86E+04 | -15 | 8.12E+03 | -129 |
| L1 | 2.96E-02 | 1.24E-04 | -61 | 2.77E-02 | -91 |
| L3 | -3.34E+03 | 3.10E+04 | 0 | 1.33E+04 | -92 |
| L4 | -3.34E+03 | 3.10E+04 | 0 | 1.33E+04 | -92 |
| NF | — | — | — | — | — |
| NS | 670. | 1.13E+05 | 0 | 746. | -90 |

Table D–760. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -2.85E+05 | 1.75E+05 | -4.75E+04 | 2.01E+04 |
| FD | -7.96E+04 | 7.96E+04 | -7.91E+04 | 7.91E+04 |
| L1 | 7.37E-08 | 5.57E-02 | 4.42E-05 | 5.57E-02 |
| L3 | -9.15E+04 | 9.15E+04 | -9.13E+04 | 9.13E+04 |
| L4 | -9.15E+04 | 9.15E+04 | -9.13E+04 | 9.13E+04 |
| NF | — | — | — | — |
| NS | -1.46E+05 | 1.49E+05 | -1.46E+05 | 1.48E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

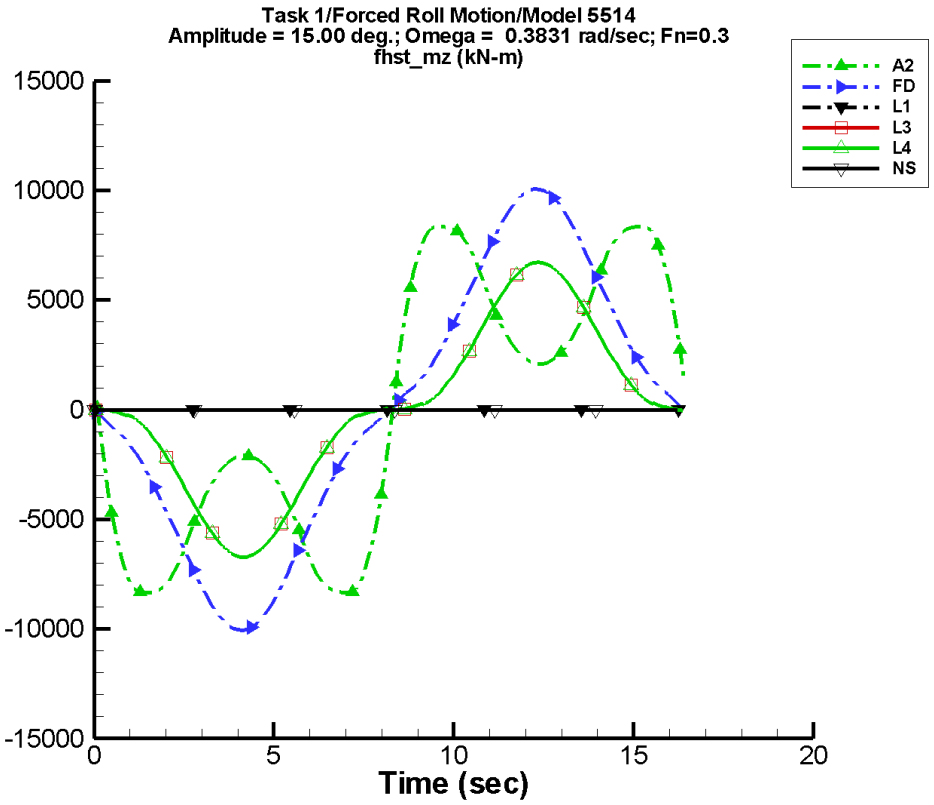
Figure D–381. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–761. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -22.5 | 8.50E+03 | 178 | 133. | -121 |
| FD | 0.533 | 1.35E+03 | -180 | 1.25 | 155 |
| L1 | 2.06E-04 | 7.64E-09 | -7 | 2.06E-04 | -93 |
| L3 | 4.30 | 227. | 177 | 7.38 | 39 |
| L4 | 4.30 | 227. | 177 | 7.38 | 39 |
| NF | — | — | — | — | — |
| NS | -7.88E-04 | 5.55E-03 | 172 | 2.06E-03 | -20 |

Table D–762. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -7.84E+03 | 7.84E+03 | -7.86E+03 | 7.82E+03 |
| FD | -1.38E+03 | 1.38E+03 | -1.37E+03 | 1.37E+03 |
| L1 | 3.27E-09 | 4.12E-04 | -2.35E-07 | 4.11E-04 |
| L3 | -284. | 286. | -273. | 276. |
| L4 | -284. | 286. | -273. | 276. |
| NF | — | — | — | — |
| NS | -7.12E-02 | 8.43E-02 | -3.12E-02 | 1.69E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

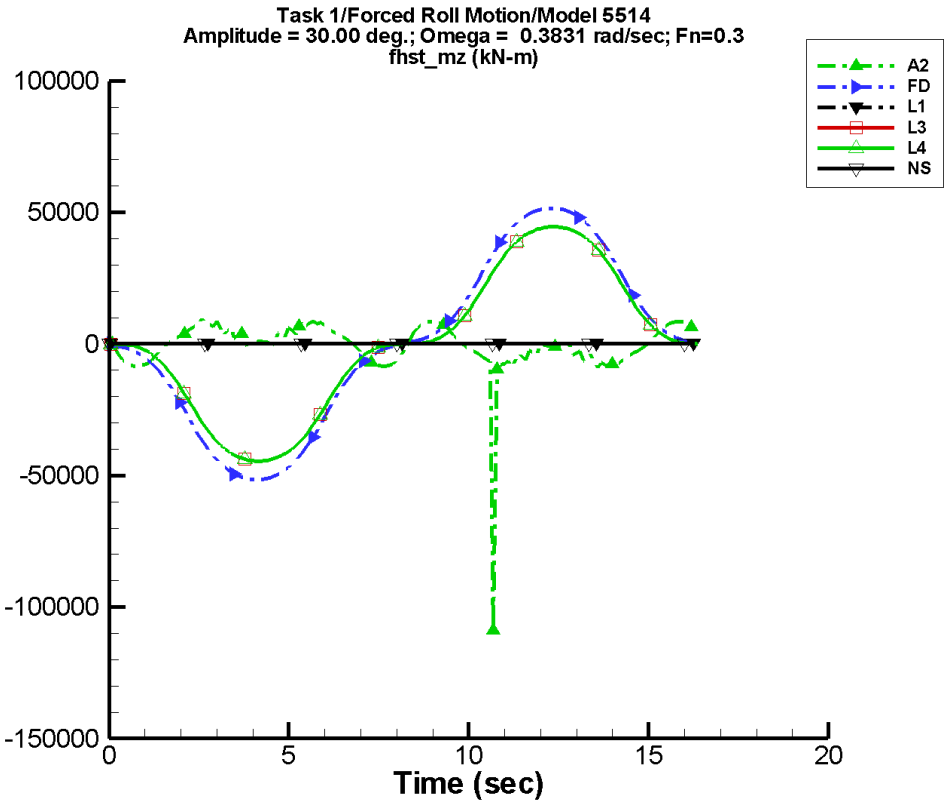
Figure D–382. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–763. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -155. | 6.40E+03 | -177 | 890. | -120 |
| FD | 48.7 | 8.40E+03 | 179 | 330. | 76 |
| L1 | 1.84E-03 | 2.94E-07 | -14 | 1.84E-03 | -93 |
| L3 | 98.2 | 4.93E+03 | 177 | 187. | 28 |
| L4 | 98.2 | 4.93E+03 | 177 | 187. | 28 |
| NF | — | — | — | — | — |
| NS | 1.28E-04 | 6.47E-03 | -157 | 1.75E-03 | -29 |

Table D–764. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.34E+03 | 8.35E+03 | -8.30E+03 | 8.30E+03 |
| FD | -1.01E+04 | 1.01E+04 | -9.97E+03 | 9.97E+03 |
| L1 | 2.93E-08 | 3.67E-03 | -2.08E-06 | 3.66E-03 |
| L3 | -6.72E+03 | 6.72E+03 | -6.69E+03 | 6.69E+03 |
| L4 | -6.72E+03 | 6.72E+03 | -6.69E+03 | 6.69E+03 |
| NF | — | — | — | — |
| NS | -7.90E-02 | 8.66E-02 | -2.72E-02 | 2.51E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

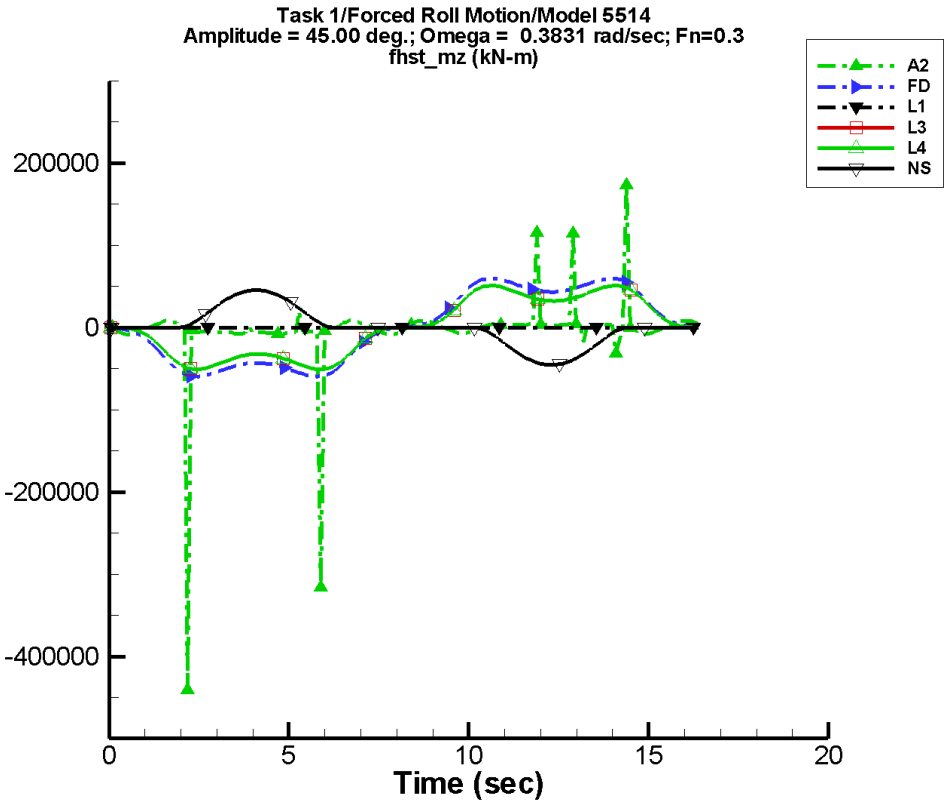
Figure D–383. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–765. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -857. | 4.62E+03 | 0 | 1.19E+03 | -161 |
| FD | 306. | 4.37E+04 | 179 | 2.16E+03 | 75 |
| L1 | 7.18E-03 | 3.88E-06 | -17 | 7.10E-03 | -93 |
| L3 | 665. | 3.58E+04 | 177 | 1.27E+03 | 31 |
| L4 | 665. | 3.58E+04 | 177 | 1.27E+03 | 31 |
| NF | — | — | — | — | — |
| NS | 1.25E-03 | 5.18E-03 | -13 | 4.36E-03 | 105 |

Table D–766. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.09E+05 | 9.75E+03 | -2.05E+04 | 7.83E+03 |
| FD | -5.16E+04 | 5.16E+04 | -5.13E+04 | 5.13E+04 |
| L1 | 1.17E-07 | 1.42E-02 | -7.88E-06 | 1.42E-02 |
| L3 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| L4 | -4.46E+04 | 4.46E+04 | -4.45E+04 | 4.45E+04 |
| NF | — | — | — | — |
| NS | -8.72E-02 | 8.83E-02 | -4.18E-02 | 3.34E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

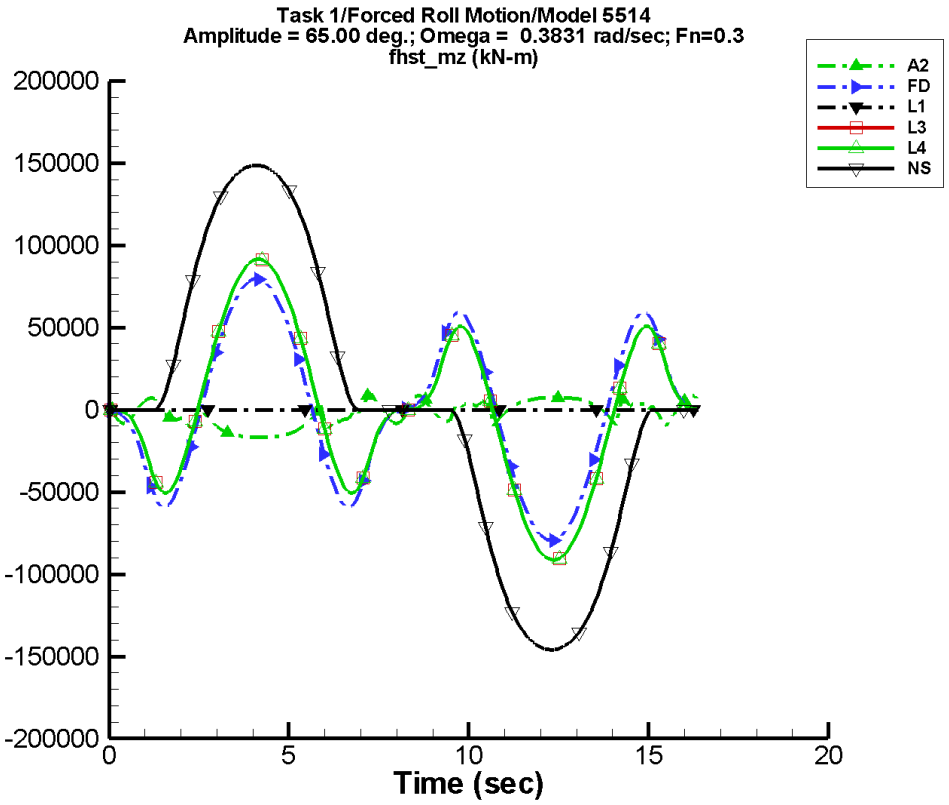
Figure D–384. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–767. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -1.65E+03 | 1.11E+04 | 173 | 1.25E+03 | -141 |
| FD | -149. | 5.78E+04 | 179 | 758. | -81 |
| L1 | 1.55E-02 | 1.82E-05 | -18 | 1.51E-02 | -93 |
| L3 | 12.8 | 4.71E+04 | 178 | 741. | 119 |
| L4 | 12.8 | 4.71E+04 | 178 | 741. | 119 |
| NF | — | — | — | — | — |
| NS | 0.918 | 2.49E+04 | 0 | 1.34 | -90 |

Table D–768. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -4.41E+05 | 1.73E+05 | -5.95E+04 | 1.81E+04 |
| FD | -5.95E+04 | 5.95E+04 | -5.84E+04 | 5.84E+04 |
| L1 | 2.65E-07 | 3.01E-02 | -1.60E-05 | 3.00E-02 |
| L3 | -5.10E+04 | 5.10E+04 | -5.04E+04 | 5.05E+04 |
| L4 | -5.10E+04 | 5.10E+04 | -5.04E+04 | 5.05E+04 |
| NF | — | — | — | — |
| NS | -4.55E+04 | 4.55E+04 | -4.52E+04 | 4.52E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

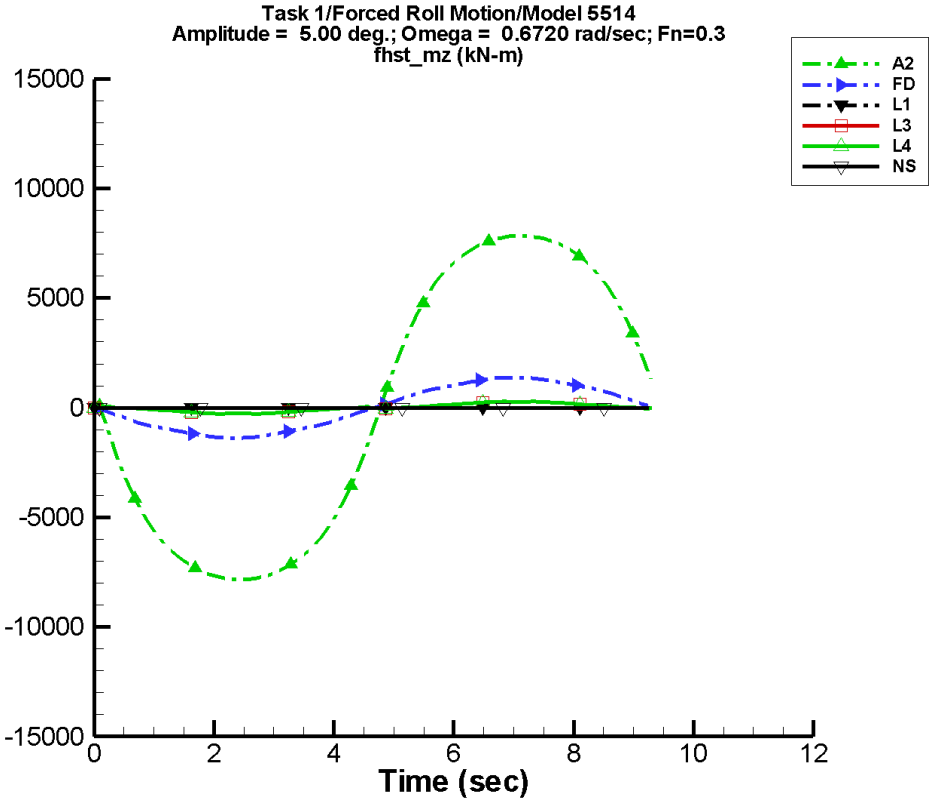
Figure D–385. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–769. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -2.25E+03 | 7.16E+03 | 177 | 3.02E+03 | 77 |
| FD | -1.49E+03 | 1.93E+04 | -9 | 1.13E+04 | -105 |
| L1 | 2.96E-02 | 7.52E-05 | -18 | 2.79E-02 | -92 |
| L3 | -3.09E+03 | 2.82E+04 | -12 | 6.21E+03 | -164 |
| L4 | -3.09E+03 | 2.82E+04 | -12 | 6.21E+03 | -164 |
| NF | — | — | — | — | — |
| NS | 668. | 1.13E+05 | 0 | 743. | -90 |

Table D–770. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.69E+04 | 9.79E+03 | -1.67E+04 | 7.16E+03 |
| FD | -7.96E+04 | 7.96E+04 | -7.77E+04 | 7.77E+04 |
| L1 | 5.53E-07 | 5.57E-02 | -2.67E-05 | 5.56E-02 |
| L3 | -9.14E+04 | 9.14E+04 | -9.08E+04 | 9.07E+04 |
| L4 | -9.14E+04 | 9.14E+04 | -9.08E+04 | 9.07E+04 |
| NF | — | — | — | — |
| NS | -1.46E+05 | 1.49E+05 | -1.46E+05 | 1.48E+05 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

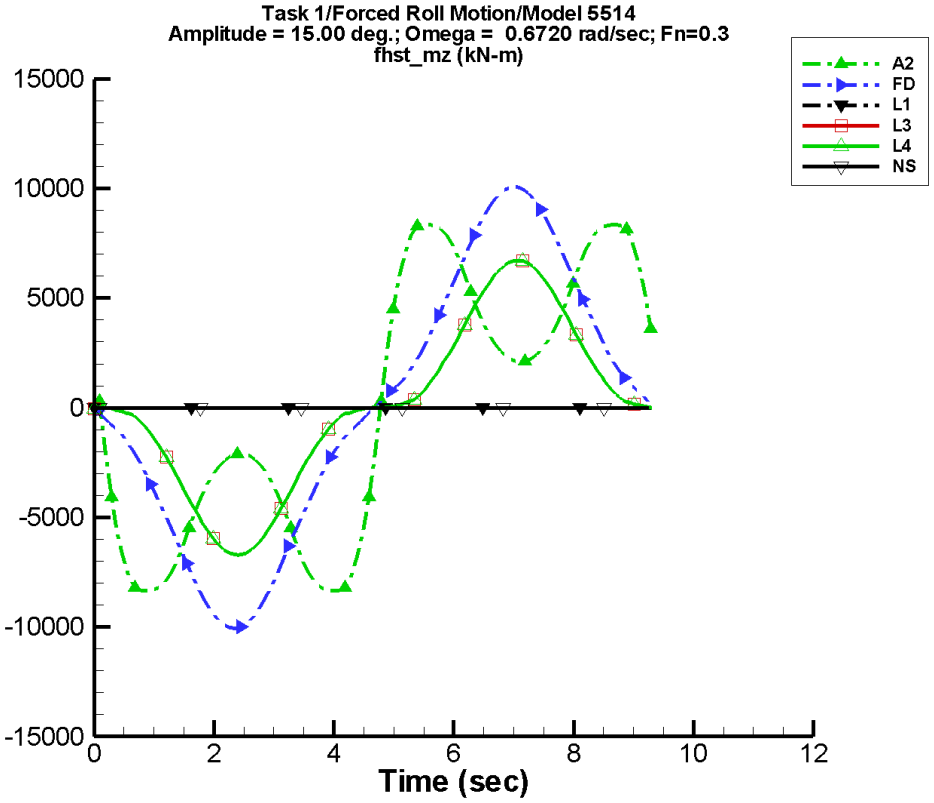
Figure D–386. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–771. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -42.7 | 8.54E+03 | 177 | 97.3 | -141 |
| FD | 0.552 | 1.35E+03 | 180 | 1.30 | -135 |
| L1 | 2.06E-04 | 1.94E-08 | -3 | 2.06E-04 | -95 |
| L3 | 3.83 | 226. | 176 | 7.46 | 39 |
| L4 | 3.83 | 226. | 176 | 7.46 | 39 |
| NF | — | — | — | — | — |
| NS | -2.89E-04 | 1.07E-02 | 175 | 5.51E-03 | -46 |

Table D–772. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -7.83E+03 | 7.83E+03 | -7.79E+03 | 7.79E+03 |
| FD | -1.38E+03 | 1.38E+03 | -1.36E+03 | 1.37E+03 |
| L1 | 5.72E-09 | 4.12E-04 | 1.80E-07 | 4.09E-04 |
| L3 | -284. | 284. | -268. | 268. |
| L4 | -284. | 284. | -268. | 268. |
| NF | — | — | — | — |
| NS | -0.104 | 7.59E-02 | -3.05E-02 | 2.54E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

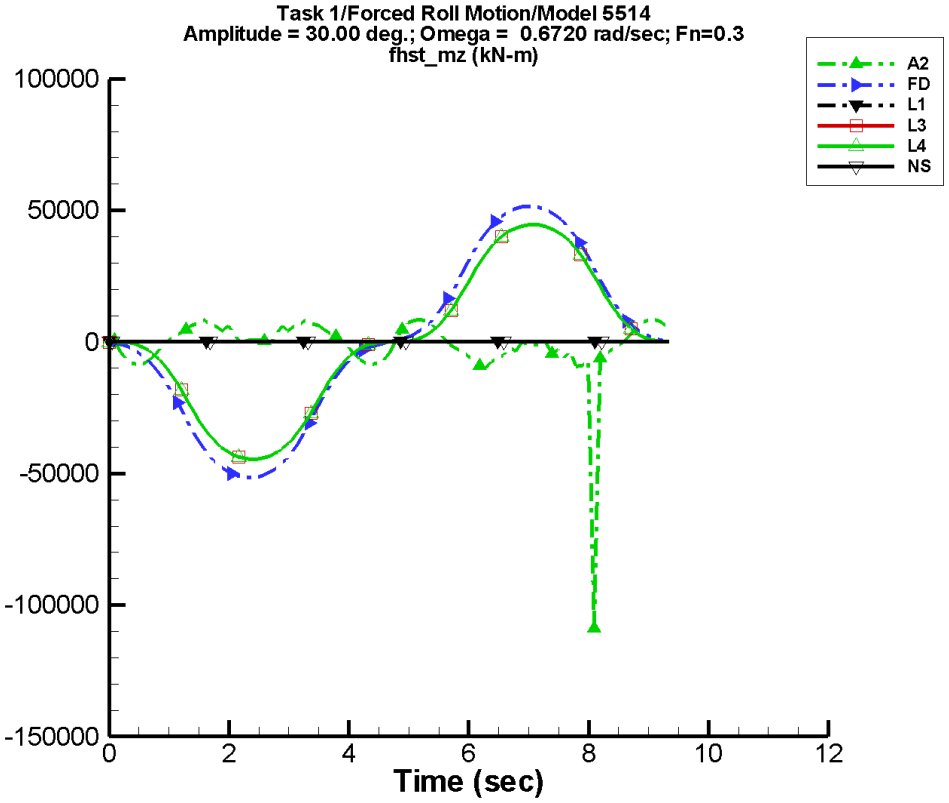
Figure D–387. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–773. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -289. | 6.68E+03 | -179 | 650. | -140 |
| FD | 126. | 8.48E+03 | 179 | 234. | 147 |
| L1 | 1.84E-03 | 5.04E-07 | -1 | 1.84E-03 | -95 |
| L3 | 101. | 4.92E+03 | 176 | 193. | 24 |
| L4 | 101. | 4.92E+03 | 176 | 193. | 24 |
| NF | — | — | — | — | — |
| NS | -3.95E-03 | 5.37E-03 | -166 | 3.11E-03 | -120 |

Table D–774. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.35E+03 | 8.35E+03 | -8.15E+03 | 8.15E+03 |
| FD | -1.01E+04 | 1.01E+04 | -9.78E+03 | 9.86E+03 |
| L1 | 5.15E-08 | 3.67E-03 | 1.73E-06 | 3.64E-03 |
| L3 | -6.72E+03 | 6.72E+03 | -6.63E+03 | 6.63E+03 |
| L4 | -6.72E+03 | 6.72E+03 | -6.63E+03 | 6.63E+03 |
| NF | — | — | — | — |
| NS | -7.34E-02 | 7.70E-02 | -2.57E-02 | 1.85E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

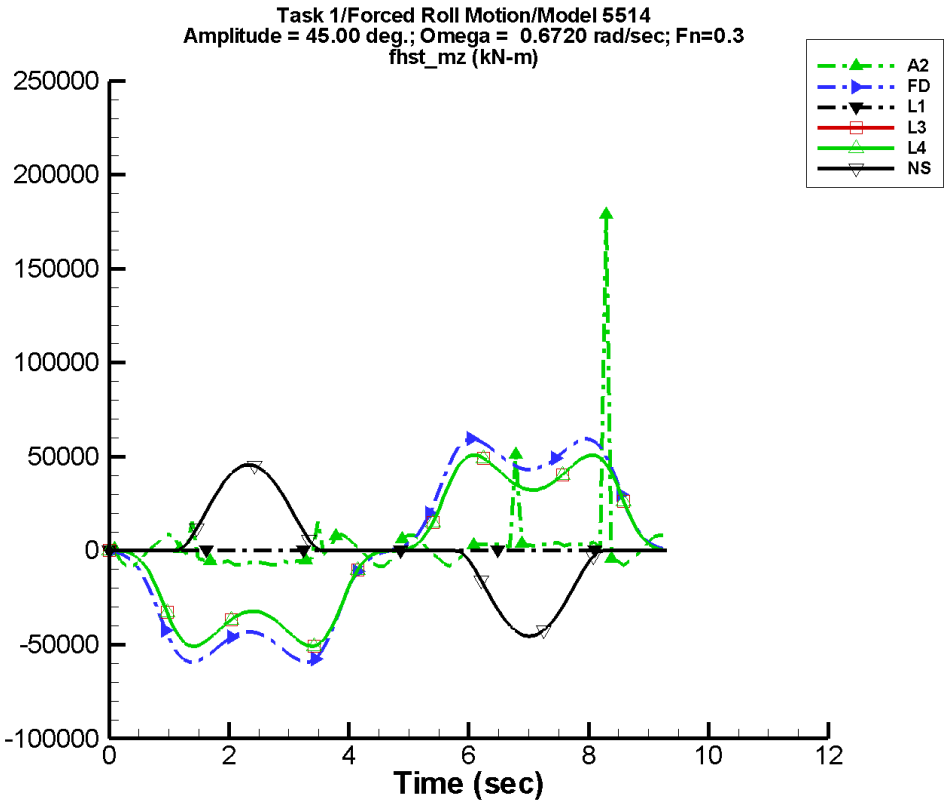
Figure D–388. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–775. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -1.40E+03 | 5.50E+03 | -23 | 1.99E+03 | -11 |
| FD | 785. | 4.40E+04 | 178 | 1.53E+03 | 141 |
| L1 | 7.18E-03 | 6.29E-06 | -1 | 7.10E-03 | -95 |
| L3 | 640. | 3.59E+04 | 176 | 1.25E+03 | 31 |
| L4 | 640. | 3.59E+04 | 176 | 1.25E+03 | 31 |
| NF | — | — | — | — | — |
| NS | -2.70E-05 | 4.10E-03 | 20 | 3.99E-03 | 121 |

Table D–776. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.09E+05 | 8.41E+03 | -1.97E+04 | 7.70E+03 |
| FD | -5.16E+04 | 5.16E+04 | -5.08E+04 | 5.10E+04 |
| L1 | 2.06E-07 | 1.42E-02 | 8.35E-06 | 1.41E-02 |
| L3 | -4.46E+04 | 4.45E+04 | -4.43E+04 | 4.43E+04 |
| L4 | -4.46E+04 | 4.45E+04 | -4.43E+04 | 4.43E+04 |
| NF | — | — | — | — |
| NS | -0.103 | 8.20E-02 | -4.05E-02 | 2.54E-02 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

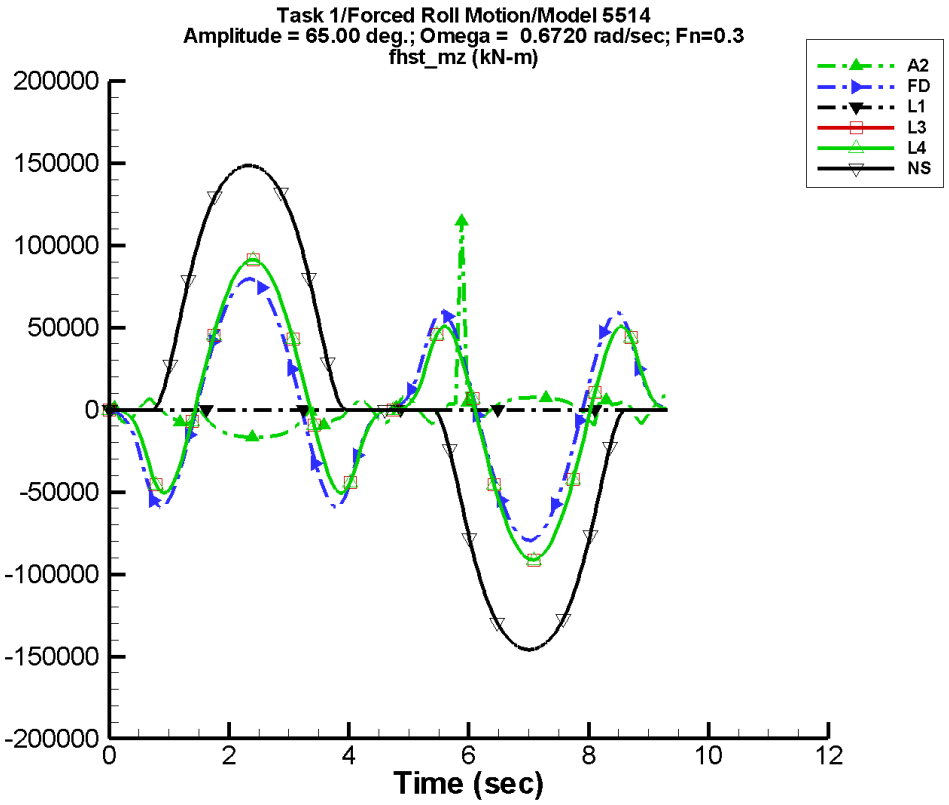
Figure D–389. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–777. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | 2.11E+03 | 6.35E+03 | 154 | 3.13E+03 | -178 |
| FD | -319. | 5.69E+04 | -180 | 950. | 28 |
| L1 | 1.55E-02 | 2.94E-05 | -1 | 1.51E-02 | -94 |
| L3 | -238. | 4.76E+04 | 178 | 1.30E+03 | 130 |
| L4 | -238. | 4.76E+04 | 178 | 1.30E+03 | 130 |
| NF | — | — | — | — | — |
| NS | -0.384 | 2.49E+04 | 0 | 0.607 | 93 |

Table D–778. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -8.39E+03 | 1.79E+05 | -6.71E+03 | 2.27E+04 |
| FD | -5.95E+04 | 5.95E+04 | -5.61E+04 | 5.61E+04 |
| L1 | 4.63E-07 | 3.01E-02 | 2.41E-05 | 2.99E-02 |
| L3 | -5.09E+04 | 5.10E+04 | -5.02E+04 | 4.96E+04 |
| L4 | -5.09E+04 | 5.10E+04 | -5.02E+04 | 4.96E+04 |
| NF | — | — | — | — |
| NS | -4.55E+04 | 4.55E+04 | -4.52E+04 | 4.52E+04 |




Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

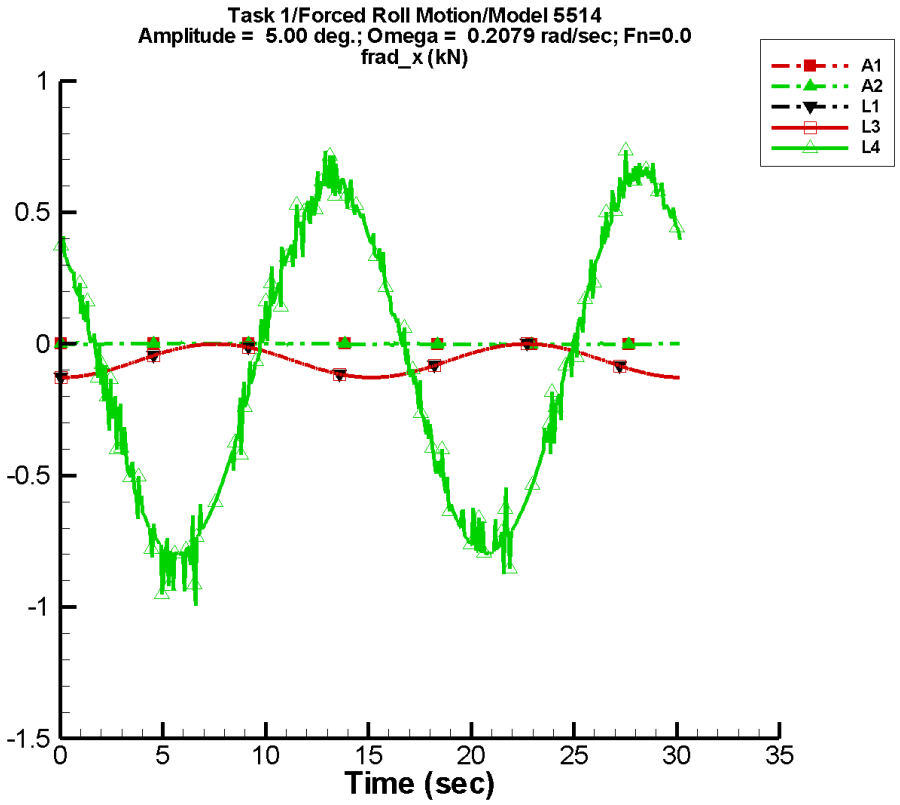
Figure D–390. Time history of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–779. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | — | — | — | — | — |
| A2 | -931. | 8.90E+03 | -173 | 3.84E+03 | 41 |
| FD | -4.15E+03 | 2.31E+04 | -18 | 7.94E+03 | -29 |
| L1 | 2.96E-02 | 1.19E-04 | -1 | 2.80E-02 | -94 |
| L3 | -3.27E+03 | 2.79E+04 | -13 | 6.55E+03 | -168 |
| L4 | -3.27E+03 | 2.79E+04 | -13 | 6.55E+03 | -168 |
| NF | — | — | — | — | — |
| NS | 677. | 1.13E+05 | 0 | 748. | -90 |

Table D–780. Minimum and maximum of of $M_z^{\text{hst}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | — | — | — | — |
| A2 | -1.68E+04 | 1.15E+05 | -1.65E+04 | 1.54E+04 |
| FD | -7.96E+04 | 7.96E+04 | -7.47E+04 | 7.34E+04 |
| L1 | 9.67E-07 | 5.57E-02 | 7.13E-05 | 5.54E-02 |
| L3 | -9.14E+04 | 9.14E+04 | -8.92E+04 | 8.93E+04 |
| L4 | -9.14E+04 | 9.14E+04 | -8.92E+04 | 8.93E+04 |
| NF | — | — | — | — |
| NS | -1.46E+05 | 1.49E+05 | -1.46E+05 | 1.48E+05 |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

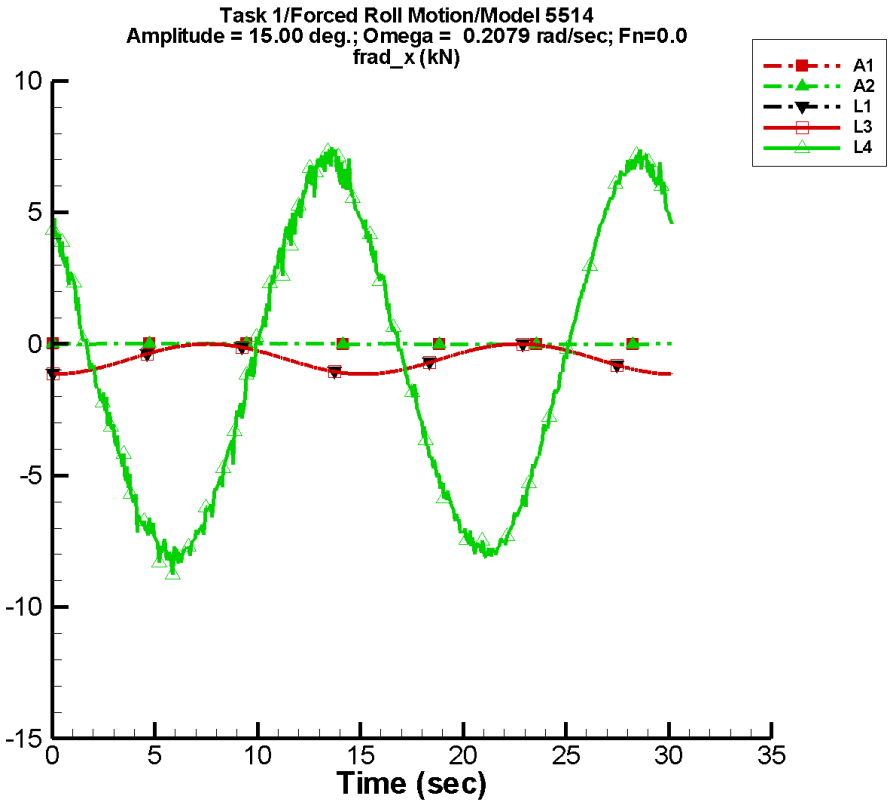
Figure D–391. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–781. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.89E-05 | 1.58E-03 | 0 | 1.55E-05 | 44 |
| A2 | -1.89E-05 | 1.58E-03 | 0 | 1.55E-05 | 44 |
| FD | — | — | — | — | — |
| L1 | -6.37E-02 | 3.59E-05 | 177 | 6.38E-02 | -91 |
| L3 | -6.37E-02 | 3.59E-05 | 177 | 6.38E-02 | -91 |
| L4 | -9.13E-02 | 6.02E-03 | 155 | 0.707 | 134 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–782. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -9.40E-03 | 9.46E-03 | -2.30E-03 | 2.32E-03 |
| A2 | -9.40E-03 | 9.46E-03 | -2.30E-03 | 2.32E-03 |
| FD | — | — | — | — |
| L1 | -0.128 | 4.39E-05 | -0.127 | -5.54E-05 |
| L3 | -0.128 | 4.39E-05 | -0.127 | -5.54E-05 |
| L4 | -1.02 | 0.735 | -0.828 | 0.653 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

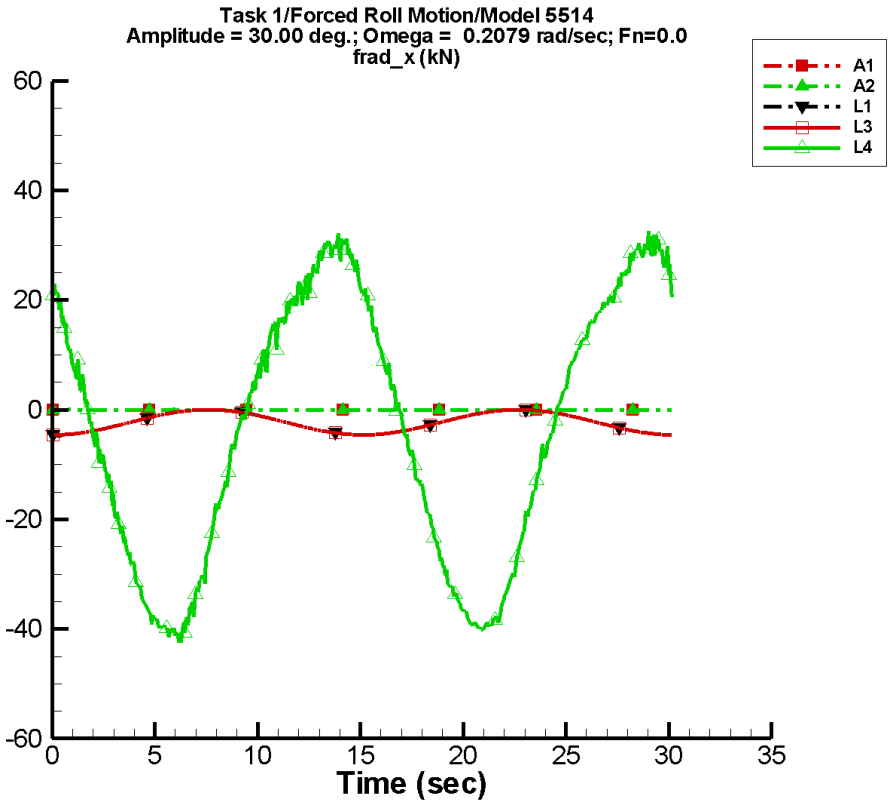
Figure D–392. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–783. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.67E-05 | 4.73E-03 | 0 | 4.64E-05 | 44 |
| A2 | -5.67E-05 | 4.73E-03 | 0 | 4.64E-05 | 44 |
| FD | — | — | — | — | — |
| L1 | -0.574 | 1.16E-04 | 173 | 0.574 | -91 |
| L3 | -0.574 | 1.16E-04 | 173 | 0.574 | -91 |
| L4 | -0.812 | 7.93E-02 | -129 | 7.29 | 130 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–784. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.82E-02 | 2.84E-02 | -6.89E-03 | 6.95E-03 |
| A2 | -2.82E-02 | 2.84E-02 | -6.89E-03 | 6.95E-03 |
| FD | — | — | — | — |
| L1 | -1.15 | 1.76E-04 | -1.15 | -7.28E-04 |
| L3 | -1.15 | 1.76E-04 | -1.15 | -7.28E-04 |
| L4 | -8.76 | 7.46 | -8.11 | 7.16 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

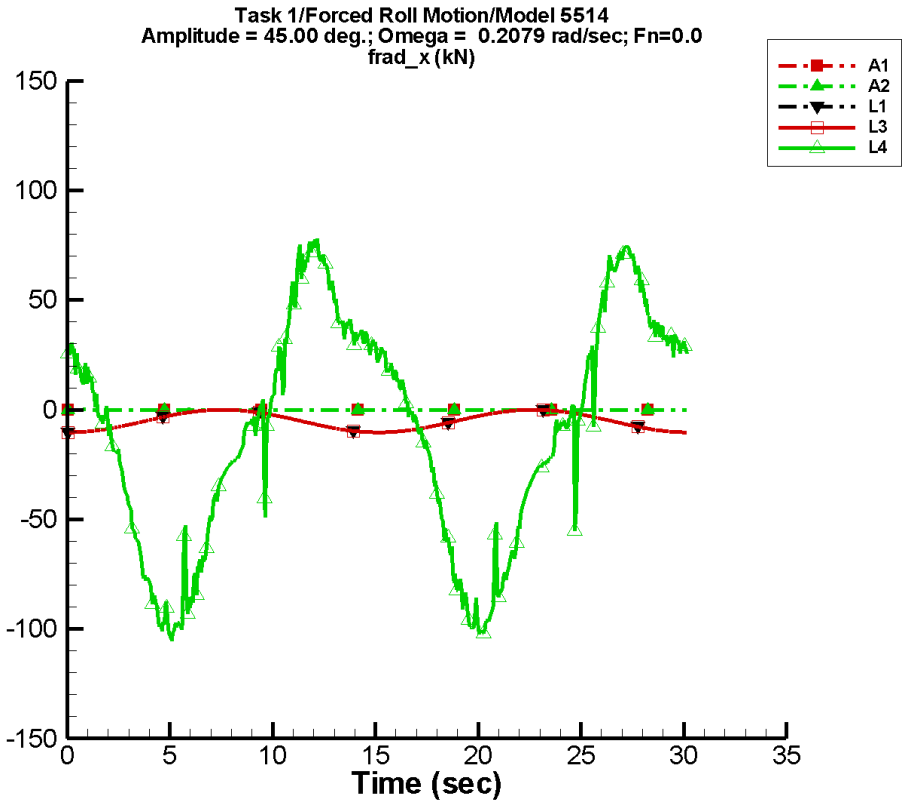
Figure D–393. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–785. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.13E-04 | 9.47E-03 | 0 | 9.27E-05 | 44 |
| A2 | -1.13E-04 | 9.47E-03 | 0 | 9.27E-05 | 44 |
| FD | — | — | — | — | — |
| L1 | -2.29 | 2.54E-04 | 168 | 2.30 | -91 |
| L3 | -2.29 | 2.54E-04 | 168 | 2.30 | -91 |
| L4 | -3.50 | 0.141 | 141 | 33.5 | 134 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–786. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -5.64E-02 | 5.67E-02 | -1.38E-02 | 1.39E-02 |
| A2 | -5.64E-02 | 5.67E-02 | -1.38E-02 | 1.39E-02 |
| FD | — | — | — | — |
| L1 | -4.59 | 4.89E-04 | -4.59 | -3.13E-03 |
| L3 | -4.59 | 4.89E-04 | -4.59 | -3.13E-03 |
| L4 | -42.5 | 32.6 | -41.0 | 30.4 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

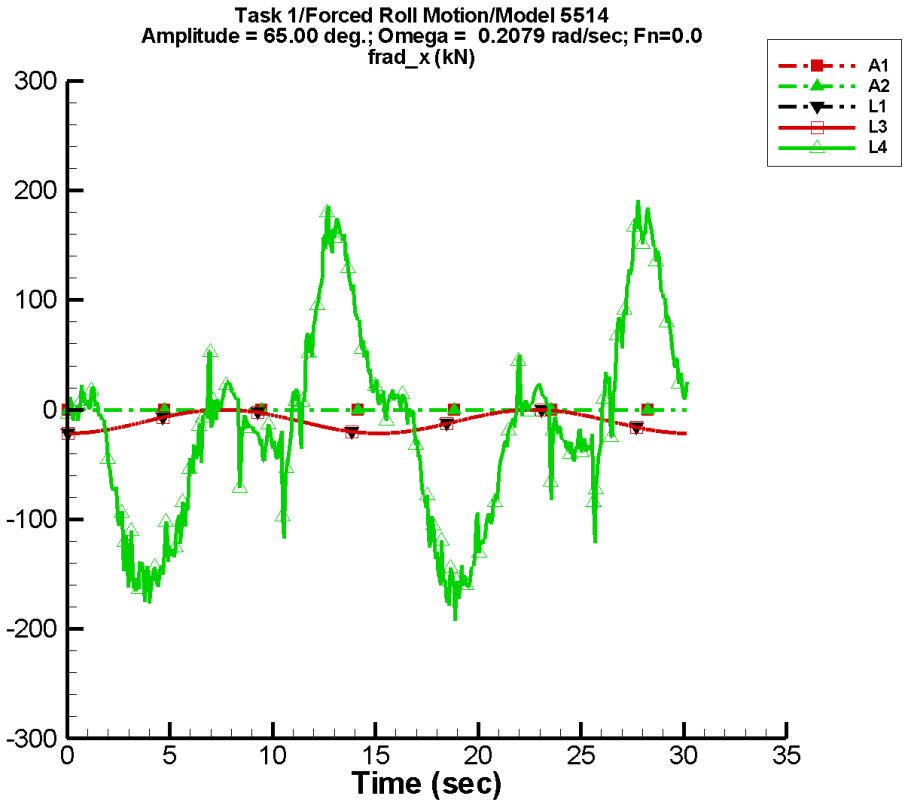
Figure D–394. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–787. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.70E-04 | 1.42E-02 | 0 | 1.39E-04 | 44 |
| A2 | -1.70E-04 | 1.42E-02 | 0 | 1.39E-04 | 44 |
| FD | — | — | — | — | — |
| L1 | -5.16 | 4.19E-04 | 163 | 5.16 | -91 |
| L3 | -5.16 | 4.19E-04 | 163 | 5.16 | -91 |
| L4 | -8.86 | 0.235 | 37 | 71.0 | 145 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–788. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.46E-02 | 8.51E-02 | -2.07E-02 | 2.09E-02 |
| A2 | -8.46E-02 | 8.51E-02 | -2.07E-02 | 2.09E-02 |
| FD | — | — | — | — |
| L1 | -10.3 | 9.52E-04 | -10.3 | -7.21E-03 |
| L3 | -10.3 | 9.52E-04 | -10.3 | -7.21E-03 |
| L4 | -105. | 78.0 | -101. | 74.5 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

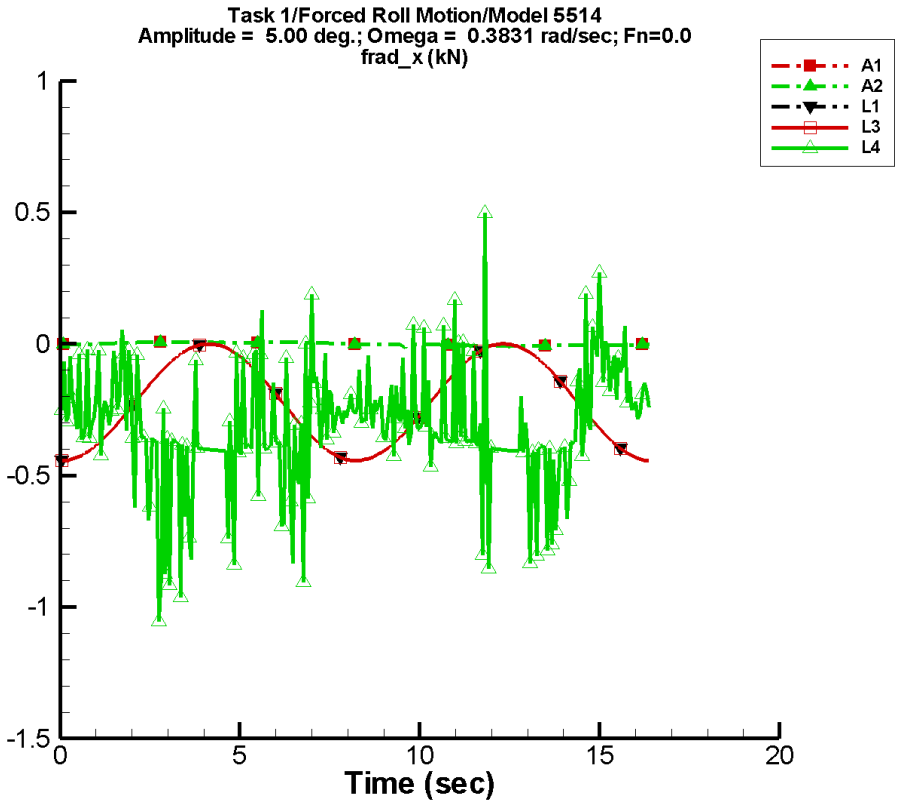
Figure D–395. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–789. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.46E-04 | 2.05E-02 | 0 | 2.01E-04 | 44 |
| A2 | -2.46E-04 | 2.05E-02 | 0 | 2.01E-04 | 44 |
| FD | — | — | — | — | — |
| L1 | -10.8 | 6.82E-04 | 159 | 10.8 | -91 |
| L3 | -10.8 | 6.82E-04 | 159 | 10.8 | -91 |
| L4 | -14.8 | 2.23 | -161 | 94.2 | 154 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–790. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.122 | 0.123 | -2.98E-02 | 3.01E-02 |
| A2 | -0.122 | 0.123 | -2.98E-02 | 3.01E-02 |
| FD | — | — | — | — |
| L1 | -21.6 | 1.76E-03 | -21.5 | -1.52E-02 |
| L3 | -21.6 | 1.76E-03 | -21.5 | -1.52E-02 |
| L4 | -193. | 191. | -164. | 168. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

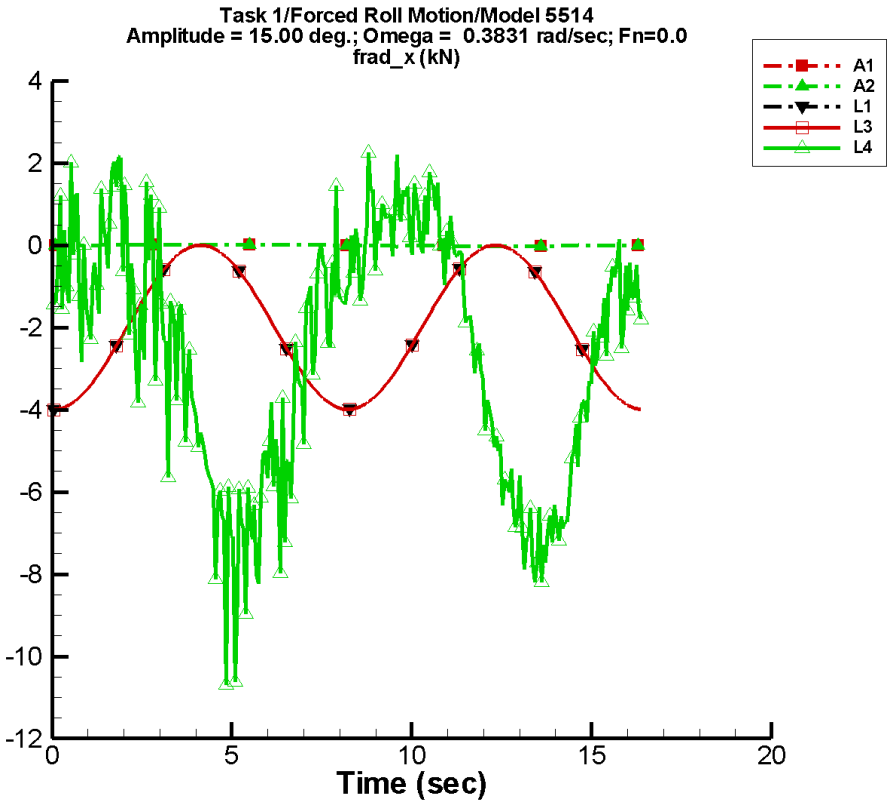
Figure D–396. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–791. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -7.56E-05 | 6.83E-03 | -6 | 1.42E-04 | -26 |
| A2 | -7.56E-05 | 6.83E-03 | -6 | 1.42E-04 | -26 |
| FD | — | — | — | — | — |
| L1 | -0.222 | 1.54E-04 | 171 | 0.222 | -92 |
| L3 | -0.222 | 1.54E-04 | 171 | 0.222 | -92 |
| L4 | -0.311 | 3.61E-02 | 150 | 0.123 | 84 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–792. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.53E-02 | 1.14E-02 | -8.49E-03 | 7.50E-03 |
| A2 | -1.53E-02 | 1.14E-02 | -8.49E-03 | 7.50E-03 |
| FD | — | — | — | — |
| L1 | -0.444 | 2.69E-04 | -0.444 | -9.19E-04 |
| L3 | -0.444 | 2.69E-04 | -0.444 | -9.19E-04 |
| L4 | -1.05 | 0.496 | -0.612 | -8.75E-03 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

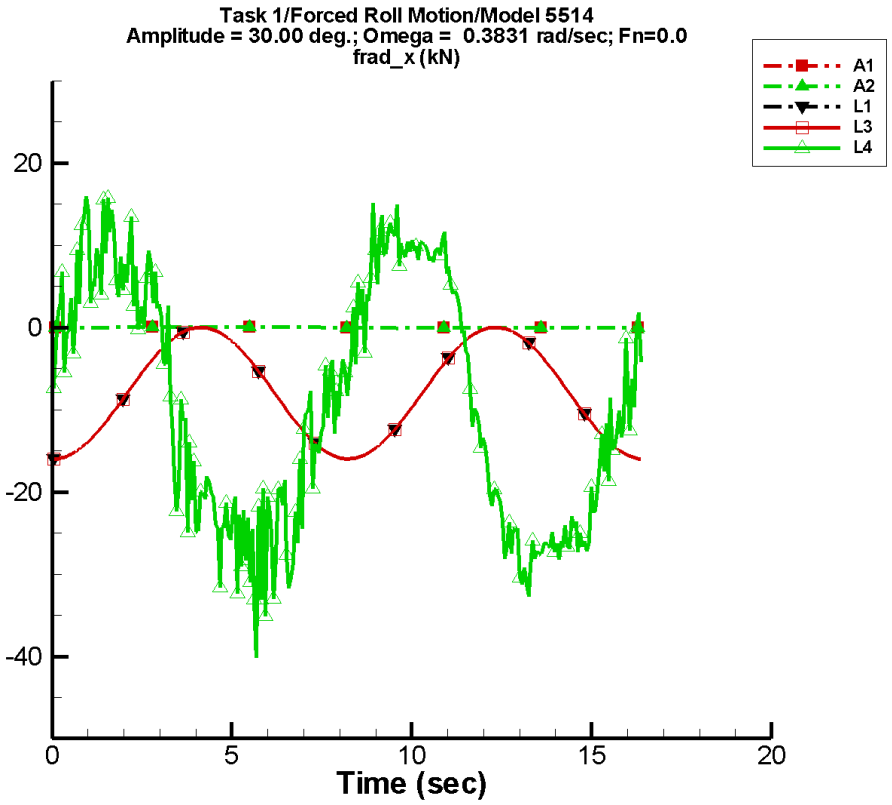
Figure D–397. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–793. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.27E-04 | 2.05E-02 | -6 | 4.26E-04 | -26 |
| A2 | -2.27E-04 | 2.05E-02 | -6 | 4.26E-04 | -26 |
| FD | — | — | — | — | — |
| L1 | -2.00 | 4.02E-04 | 179 | 2.00 | -92 |
| L3 | -2.00 | 4.02E-04 | 179 | 2.00 | -92 |
| L4 | -2.65 | 0.421 | -138 | 3.72 | 35 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–794. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.60E-02 | 3.42E-02 | -2.55E-02 | 2.25E-02 |
| A2 | -4.60E-02 | 3.42E-02 | -2.55E-02 | 2.25E-02 |
| FD | — | — | — | — |
| L1 | -4.00 | 1.44E-03 | -4.00 | -9.24E-03 |
| L3 | -4.00 | 1.44E-03 | -4.00 | -9.24E-03 |
| L4 | -10.7 | 2.25 | -7.73 | 1.32 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

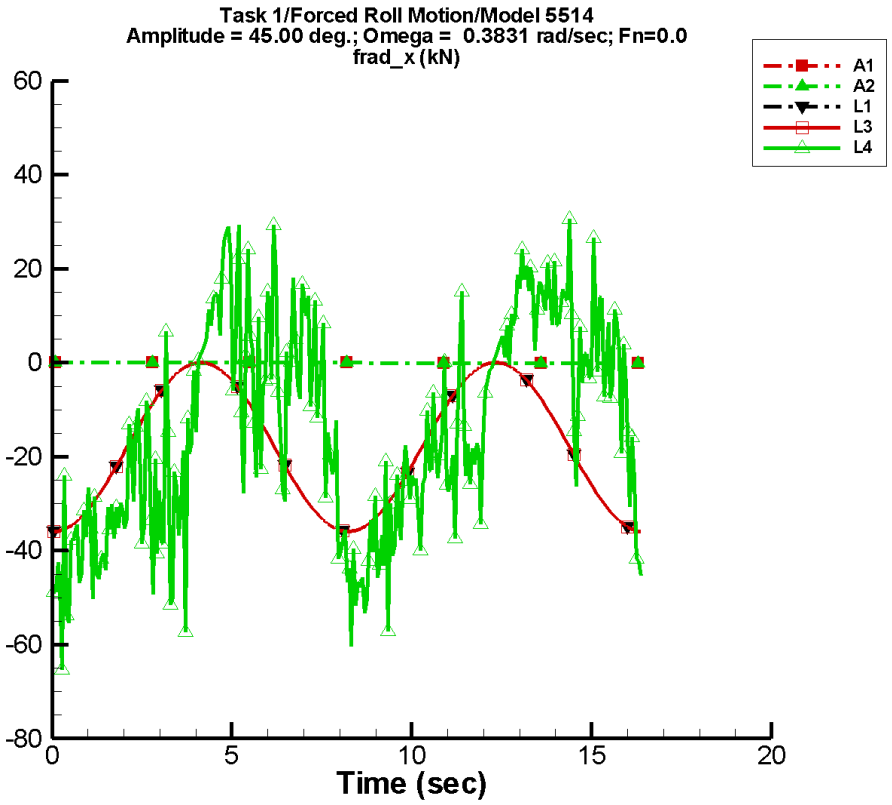
Figure D–398. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–795. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.53E-04 | 4.10E-02 | -6 | 8.52E-04 | -26 |
| A2 | -4.53E-04 | 4.10E-02 | -6 | 8.52E-04 | -26 |
| FD | — | — | — | — | — |
| L1 | -7.99 | 6.42E-04 | -166 | 7.99 | -92 |
| L3 | -7.99 | 6.42E-04 | -166 | 7.99 | -92 |
| L4 | -9.58 | 1.01 | -129 | 19.7 | 24 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–796. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -9.20E-02 | 6.84E-02 | -5.09E-02 | 4.50E-02 |
| A2 | -9.20E-02 | 6.84E-02 | -5.09E-02 | 4.50E-02 |
| FD | — | — | — | — |
| L1 | -16.0 | 4.75E-03 | -16.0 | -3.79E-02 |
| L3 | -16.0 | 4.75E-03 | -16.0 | -3.79E-02 |
| L4 | -40.2 | 15.9 | -29.4 | 11.2 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

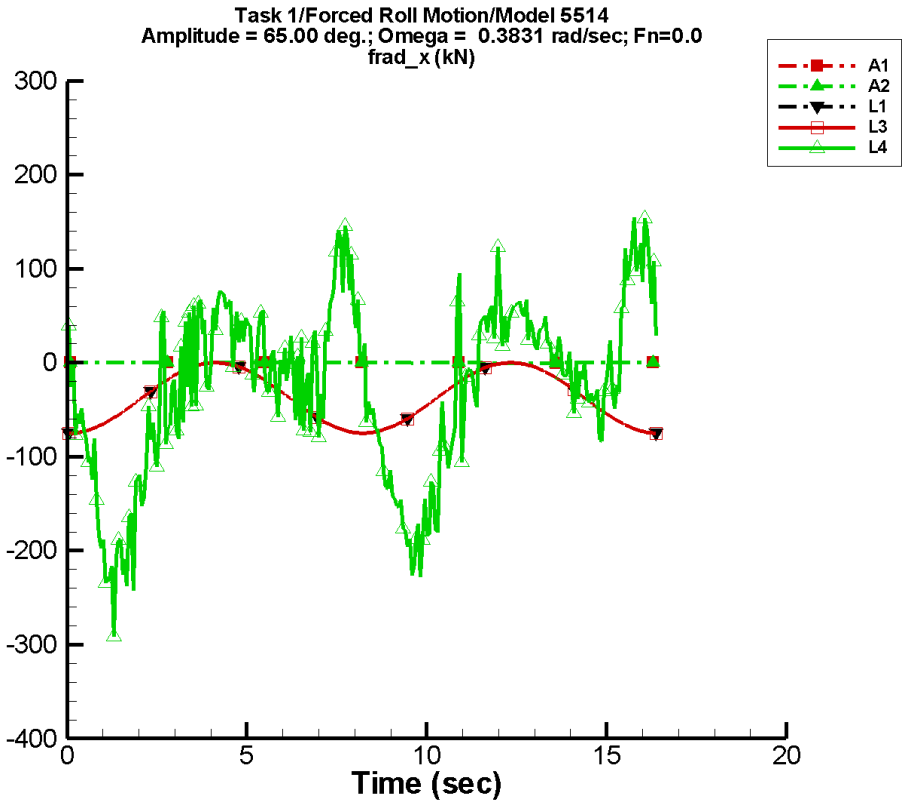
Figure D–399. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–797. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.80E-04 | 6.14E-02 | -6 | 1.28E-03 | -26 |
| A2 | -6.80E-04 | 6.14E-02 | -6 | 1.28E-03 | -26 |
| FD | — | — | — | — | — |
| L1 | -18.0 | 7.96E-04 | -143 | 18.0 | -92 |
| L3 | -18.0 | 7.96E-04 | -143 | 18.0 | -92 |
| L4 | -14.5 | 3.45 | -175 | 25.4 | -145 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–798. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.138 | 0.103 | -7.64E-02 | 6.75E-02 |
| A2 | -0.138 | 0.103 | -7.64E-02 | 6.75E-02 |
| FD | — | — | — | — |
| L1 | -36.0 | 9.96E-03 | -36.0 | -8.60E-02 |
| L3 | -36.0 | 9.96E-03 | -36.0 | -8.60E-02 |
| L4 | -65.4 | 30.6 | -52.4 | 18.3 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

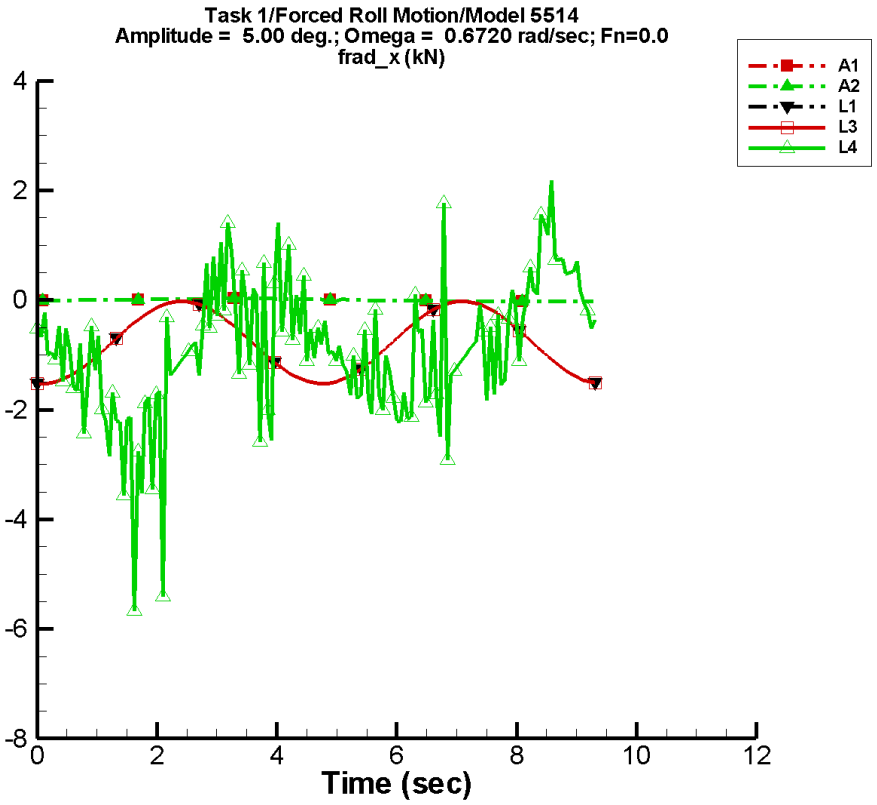
Figure D–400. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–799. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.82E-04 | 8.87E-02 | -6 | 1.85E-03 | -26 |
| A2 | -9.82E-04 | 8.87E-02 | -6 | 1.85E-03 | -26 |
| FD | — | — | — | — | — |
| L1 | -37.5 | 1.27E-03 | -108 | 37.5 | -92 |
| L3 | -37.5 | 1.27E-03 | -108 | 37.5 | -92 |
| L4 | -29.2 | 11.7 | -147 | 86.1 | -157 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–800. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.199 | 0.148 | -0.110 | 9.75E-02 |
| A2 | -0.199 | 0.148 | -0.110 | 9.75E-02 |
| FD | — | — | — | — |
| L1 | -75.1 | 1.99E-02 | -75.1 | -0.180 |
| L3 | -75.1 | 1.99E-02 | -75.1 | -0.180 |
| L4 | -294. | 155. | -226. | 124. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

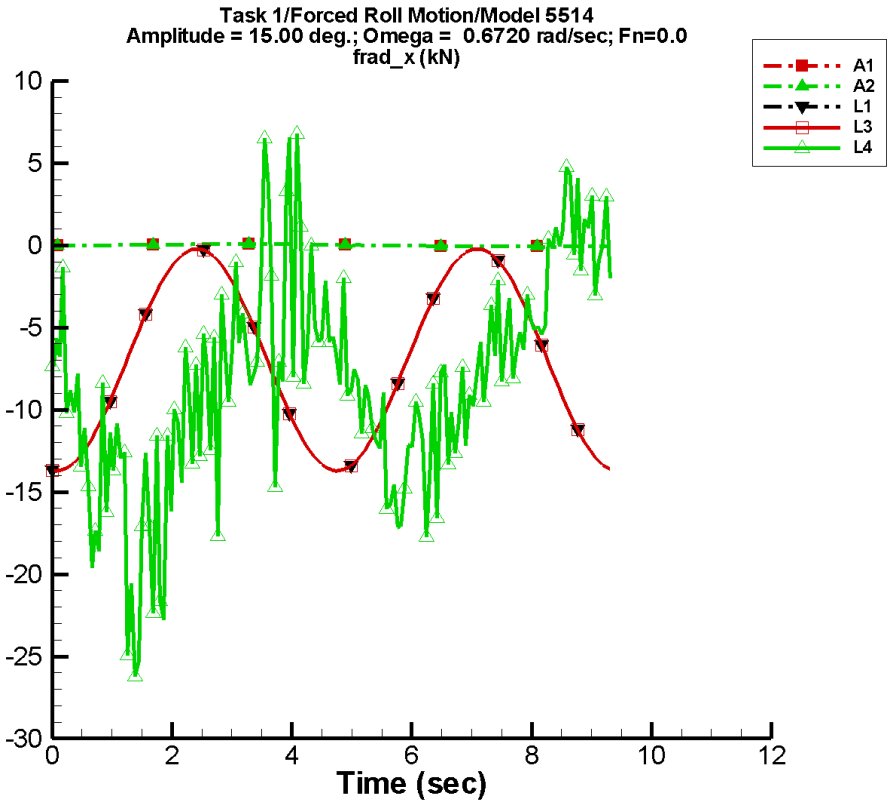
Figure D–401. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–801. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.85E-04 | 2.55E-02 | -31 | 7.13E-04 | -106 |
| A2 | 1.85E-04 | 2.55E-02 | -31 | 7.13E-04 | -106 |
| FD | — | — | — | — | — |
| L1 | -0.774 | 3.17E-04 | 153 | 0.750 | -96 |
| L3 | -0.774 | 3.17E-04 | 153 | 0.750 | -96 |
| L4 | -0.877 | 0.243 | 162 | 1.10 | 154 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–802. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.69E-02 | 2.86E-02 | -2.65E-02 | 2.80E-02 |
| A2 | -2.69E-02 | 2.86E-02 | -2.65E-02 | 2.80E-02 |
| FD | — | — | — | — |
| L1 | -1.52 | -2.42E-02 | -1.52 | -3.64E-02 |
| L3 | -1.52 | -2.42E-02 | -1.52 | -3.64E-02 |
| L4 | -5.67 | 2.18 | -3.00 | 1.07 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

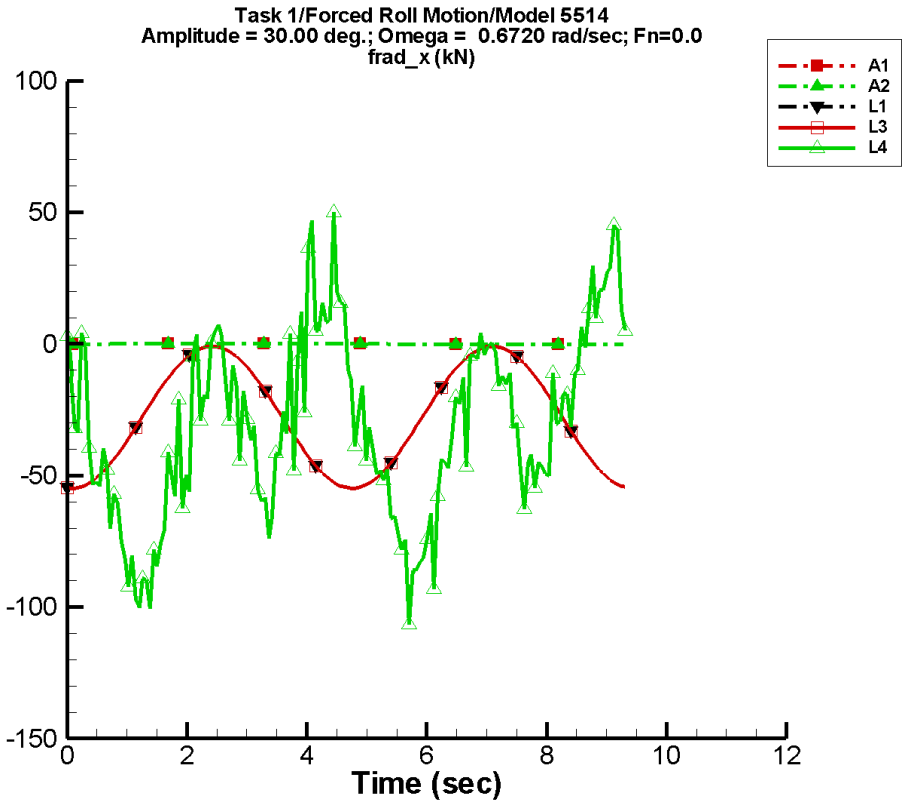
Figure D–402. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–803. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.54E-04 | 7.64E-02 | -31 | 2.14E-03 | -106 |
| A2 | 5.54E-04 | 7.64E-02 | -31 | 2.14E-03 | -106 |
| FD | — | — | — | — | — |
| L1 | -6.97 | 5.34E-04 | 173 | 6.75 | -96 |
| L3 | -6.97 | 5.34E-04 | 173 | 6.75 | -96 |
| L4 | -8.25 | 1.87 | 180 | 7.48 | 156 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–804. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -8.07E-02 | 8.58E-02 | -7.94E-02 | 8.39E-02 |
| A2 | -8.07E-02 | 8.58E-02 | -7.94E-02 | 8.39E-02 |
| FD | — | — | — | — |
| L1 | -13.7 | -0.219 | -13.7 | -0.329 |
| L3 | -13.7 | -0.219 | -13.7 | -0.329 |
| L4 | -27.2 | 6.78 | -19.8 | 1.86 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

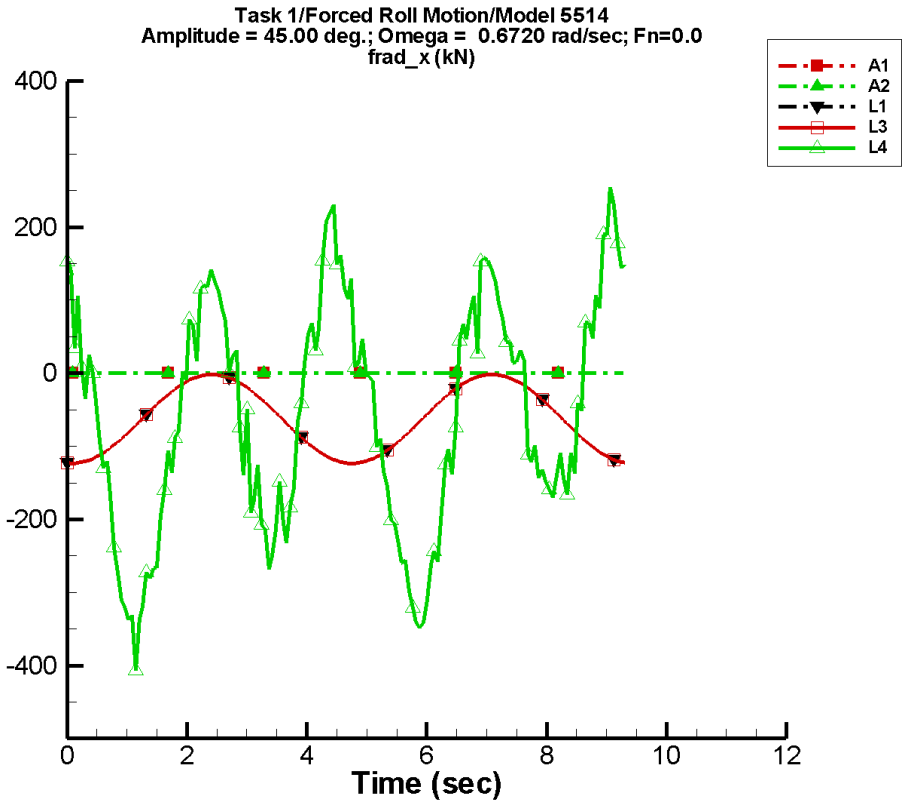
Figure D–403. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–805. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.11E-03 | 0.153 | -31 | 4.28E-03 | -106 |
| A2 | 1.11E-03 | 0.153 | -31 | 4.28E-03 | -106 |
| FD | — | — | — | — | — |
| L1 | -27.9 | 9.90E-04 | -101 | 27.0 | -96 |
| L3 | -27.9 | 9.90E-04 | -101 | 27.0 | -96 |
| L4 | -32.6 | 6.29 | -168 | 31.6 | 160 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–806. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.161 | 0.172 | -0.159 | 0.168 |
| A2 | -0.161 | 0.172 | -0.159 | 0.168 |
| FD | — | — | — | — |
| L1 | -54.9 | -0.876 | -54.9 | -1.32 |
| L3 | -54.9 | -0.876 | -54.9 | -1.32 |
| L4 | -107. | 50.1 | -91.1 | 26.7 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

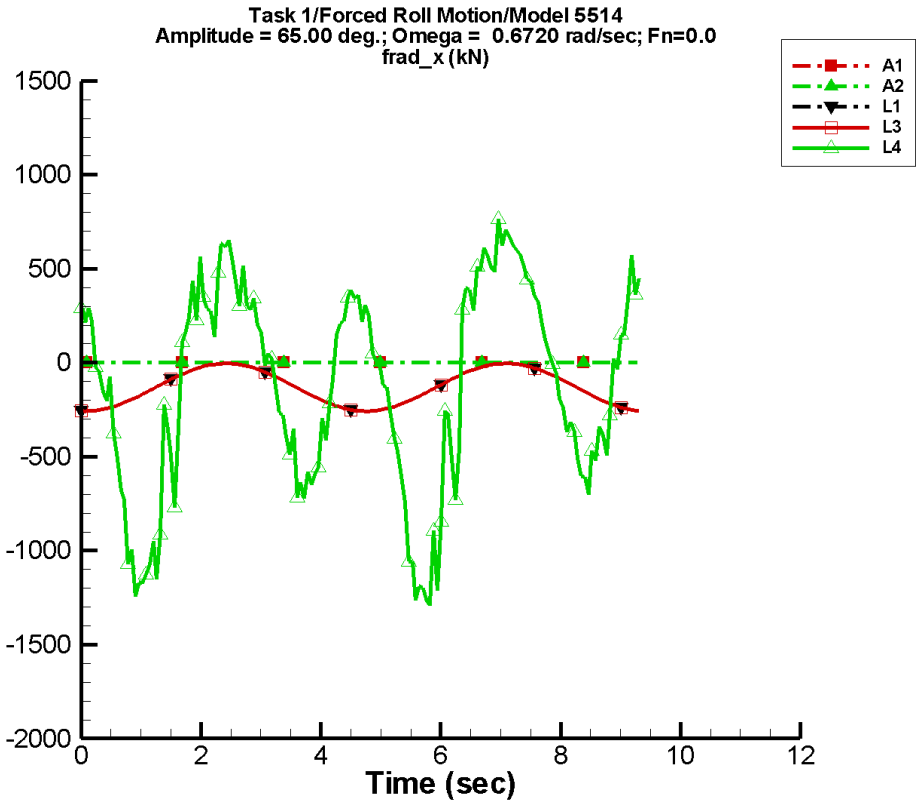
Figure D–404. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–807. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.66E-03 | 0.229 | -31 | 6.41E-03 | -106 |
| A2 | 1.66E-03 | 0.229 | -31 | 6.41E-03 | -106 |
| FD | — | — | — | — | — |
| L1 | -62.7 | 3.28E-03 | -74 | 60.7 | -96 |
| L3 | -62.7 | 3.28E-03 | -74 | 60.7 | -96 |
| L4 | -63.2 | 31.2 | 177 | 98.8 | 164 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–808. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.242 | 0.257 | -0.238 | 0.252 |
| A2 | -0.242 | 0.257 | -0.238 | 0.252 |
| FD | — | — | — | — |
| L1 | -123. | -1.97 | -123. | -2.97 |
| L3 | -123. | -1.97 | -123. | -2.97 |
| L4 | -406. | 255. | -336. | 179. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

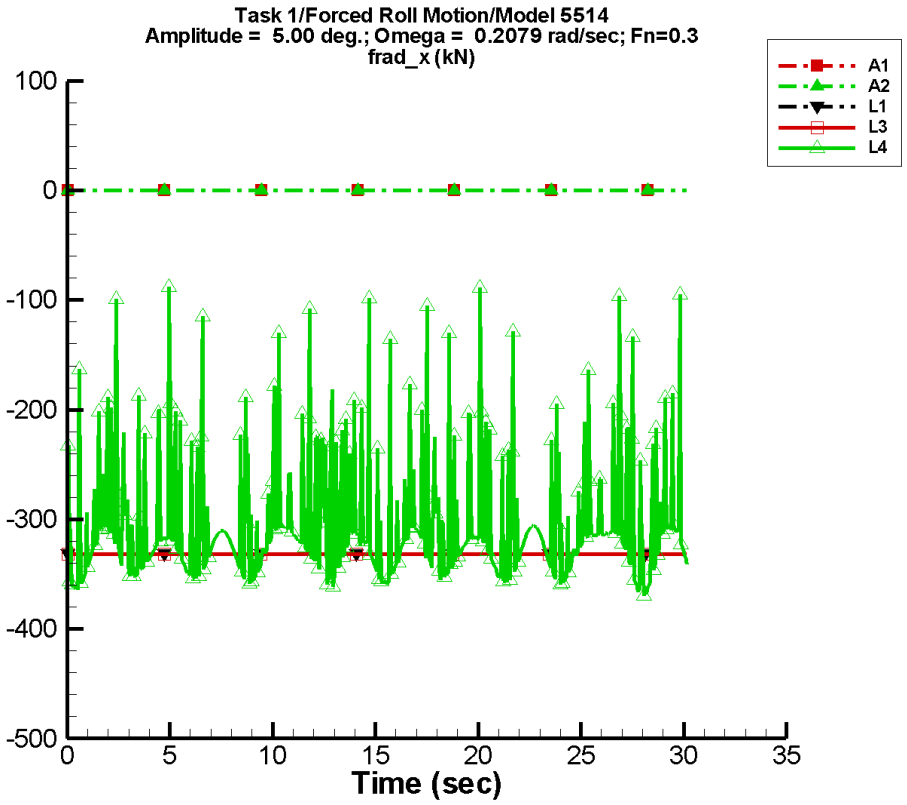
Figure D–405. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–809. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.40E-03 | 0.331 | -31 | 9.27E-03 | -106 |
| A2 | 2.40E-03 | 0.331 | -31 | 9.27E-03 | -106 |
| FD | — | — | — | — | — |
| L1 | -131. | 8.77E-03 | -64 | 127. | -96 |
| L3 | -131. | 8.77E-03 | -64 | 127. | -96 |
| L4 | -148. | 91.9 | 179 | 376. | -142 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–810. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.350 | 0.372 | -0.344 | 0.363 |
| A2 | -0.350 | 0.372 | -0.344 | 0.363 |
| FD | — | — | — | — |
| L1 | -258. | -4.12 | -258. | -6.20 |
| L3 | -258. | -4.12 | -258. | -6.20 |
| L4 | -1.31E+03 | 766. | -1.15E+03 | 627. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

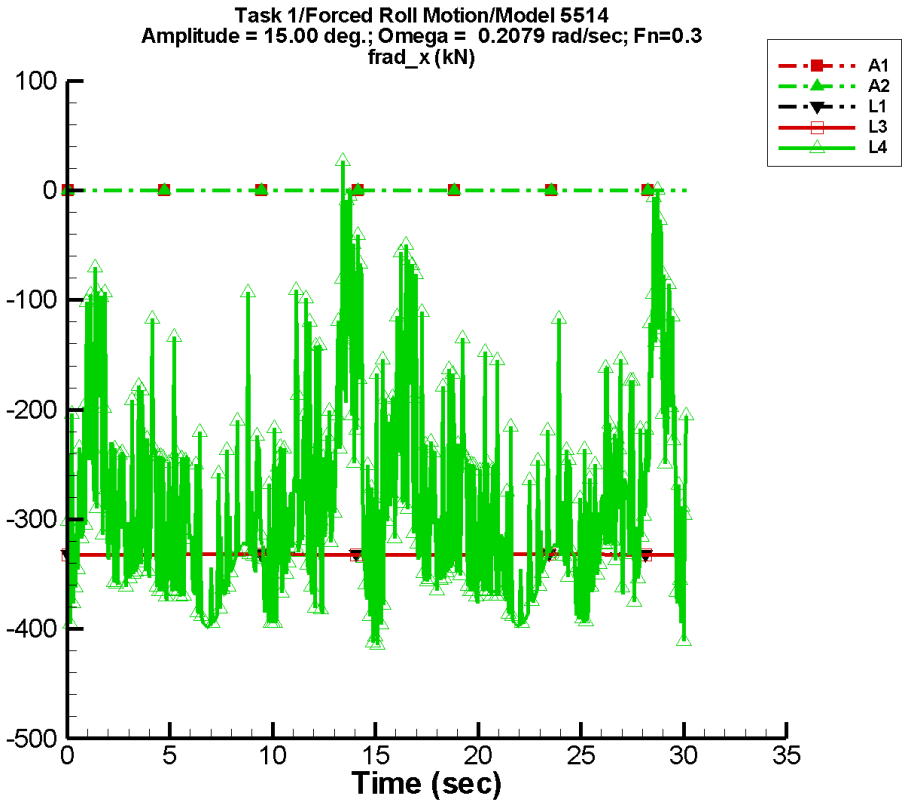
Figure D–406. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–811. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.51E-05 | 7.76E-03 | -167 | 9.30E-05 | 94 |
| A2 | -1.51E-05 | 7.76E-03 | -167 | 9.30E-05 | 94 |
| FD | — | — | — | — | — |
| L1 | -332. | 1.21E-02 | -158 | 5.32E-02 | -106 |
| L3 | -332. | 8.21E-03 | -145 | 5.26E-02 | -105 |
| L4 | -305. | 1.90 | -64 | 4.47 | 102 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–812. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.10E-02 | 2.07E-02 | -1.03E-02 | 1.02E-02 |
| A2 | -2.10E-02 | 2.07E-02 | -1.03E-02 | 1.02E-02 |
| FD | — | — | — | — |
| L1 | -332. | -332. | -332. | -332. |
| L3 | -332. | -332. | -332. | -332. |
| L4 | -372. | -85.4 | -361. | -260. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

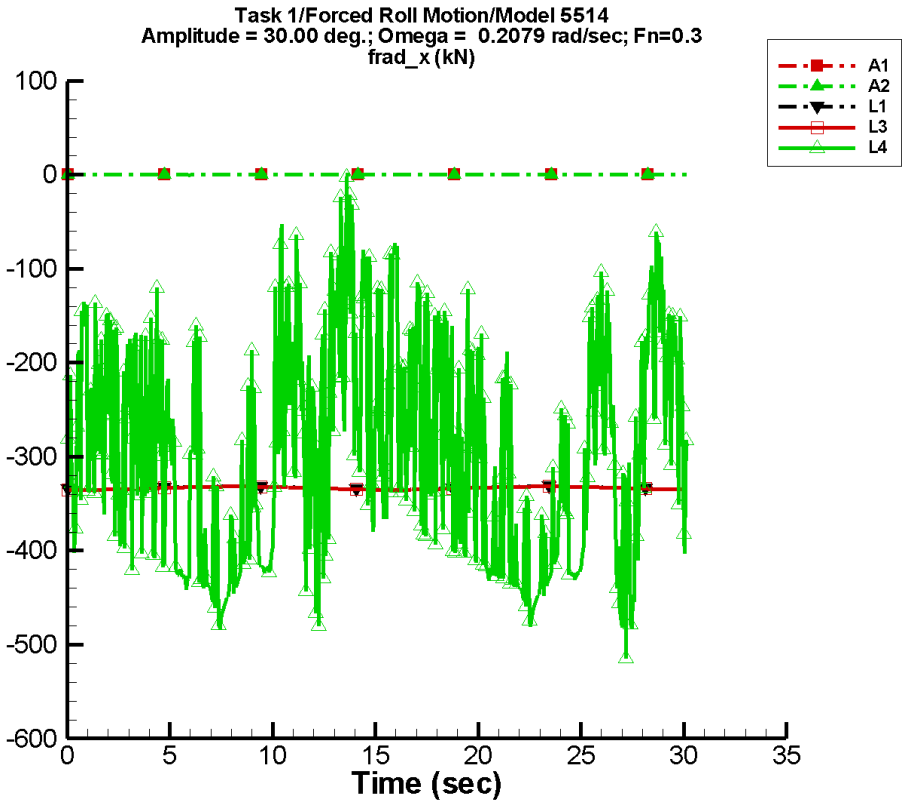
Figure D–407. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–813. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.52E-05 | 2.33E-02 | -167 | 2.79E-04 | 94 |
| A2 | -4.52E-05 | 2.33E-02 | -167 | 2.79E-04 | 94 |
| FD | — | — | — | — | — |
| L1 | -332. | 1.23E-02 | -155 | 0.432 | -106 |
| L3 | -332. | 8.48E-03 | -141 | 0.431 | -106 |
| L4 | -284. | 3.28 | -50 | 56.2 | 96 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–814. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.29E-02 | 6.21E-02 | -3.09E-02 | 3.07E-02 |
| A2 | -6.29E-02 | 6.21E-02 | -3.09E-02 | 3.07E-02 |
| FD | — | — | — | — |
| L1 | -333. | -332. | -333. | -332. |
| L3 | -333. | -332. | -333. | -332. |
| L4 | -416. | 26.8 | -393. | -78.1 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

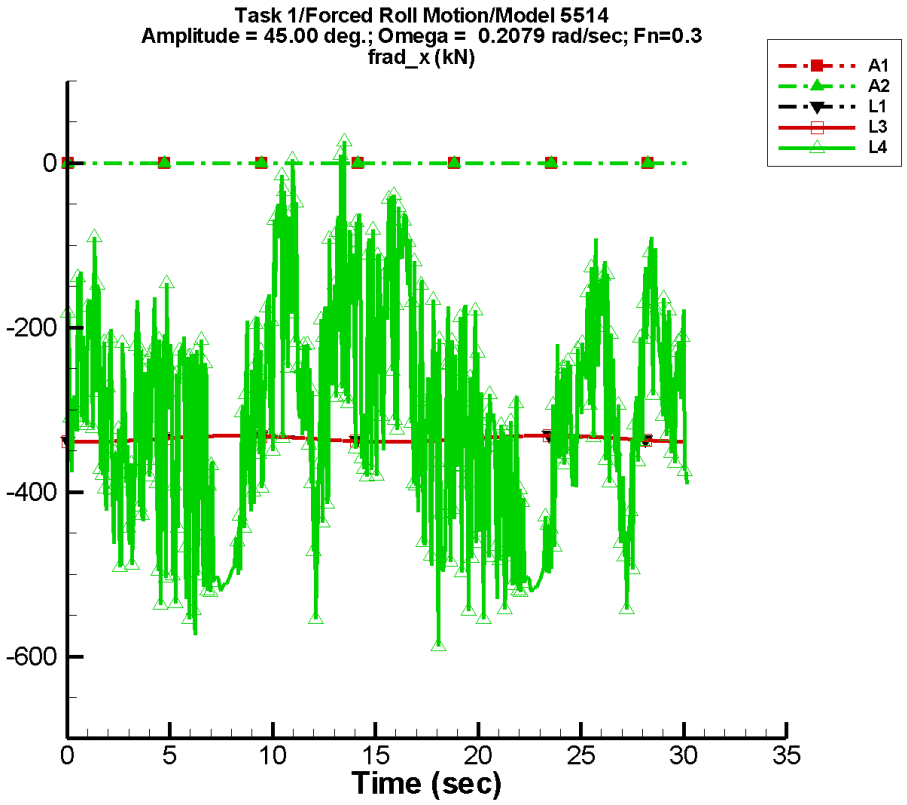
Figure D–408. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–815. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.04E-05 | 4.65E-02 | -167 | 5.58E-04 | 94 |
| A2 | -9.04E-05 | 4.65E-02 | -167 | 5.58E-04 | 94 |
| FD | — | — | — | — | — |
| L1 | -333. | 1.34E-02 | -151 | 1.71 | -106 |
| L3 | -333. | 9.99E-03 | -139 | 1.71 | -106 |
| L4 | -297. | 18.4 | -71 | 85.9 | 93 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–816. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.126 | 0.124 | -6.17E-02 | 6.13E-02 |
| A2 | -0.126 | 0.124 | -6.17E-02 | 6.13E-02 |
| FD | — | — | — | — |
| L1 | -335. | -332. | -335. | -332. |
| L3 | -335. | -332. | -335. | -332. |
| L4 | -515. | -2.24 | -454. | -56.0 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

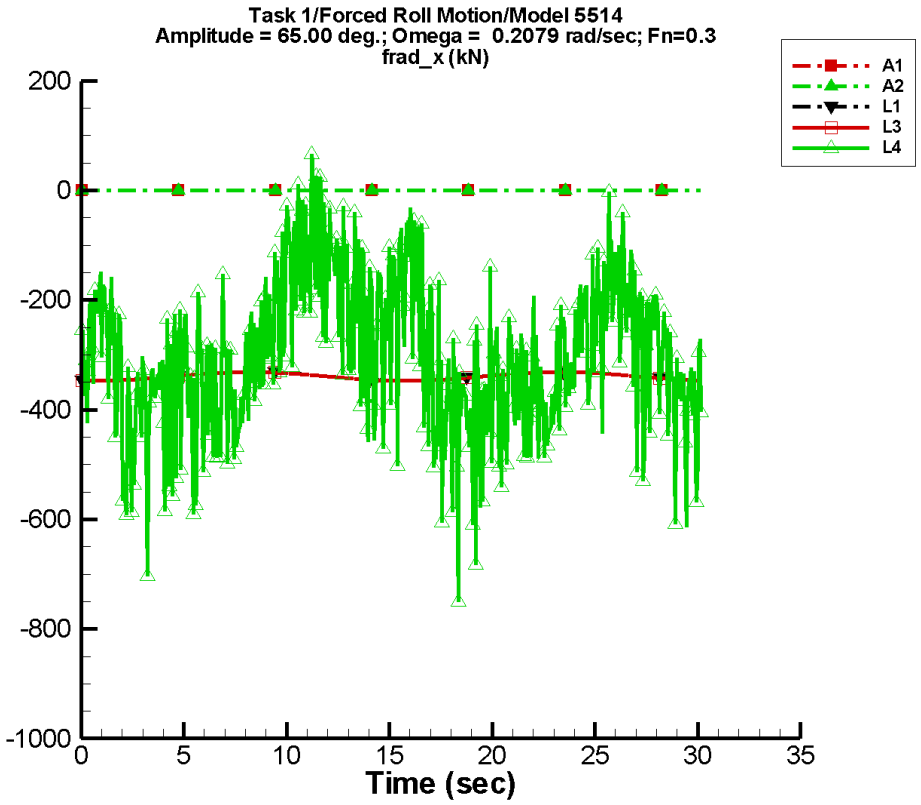
Figure D–409. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–817. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.36E-04 | 6.98E-02 | -167 | 8.37E-04 | 94 |
| A2 | -1.36E-04 | 6.98E-02 | -167 | 8.37E-04 | 94 |
| FD | — | — | — | — | — |
| L1 | -335. | 1.42E-02 | -147 | 3.83 | -106 |
| L3 | -335. | 1.09E-02 | -137 | 3.83 | -106 |
| L4 | -306. | 23.6 | -51 | 97.4 | 115 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–818. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.189 | 0.186 | -9.26E-02 | 9.20E-02 |
| A2 | -0.189 | 0.186 | -9.26E-02 | 9.20E-02 |
| FD | — | — | — | — |
| L1 | -339. | -331. | -339. | -332. |
| L3 | -339. | -332. | -339. | -332. |
| L4 | -588. | 26.7 | -517. | -43.7 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

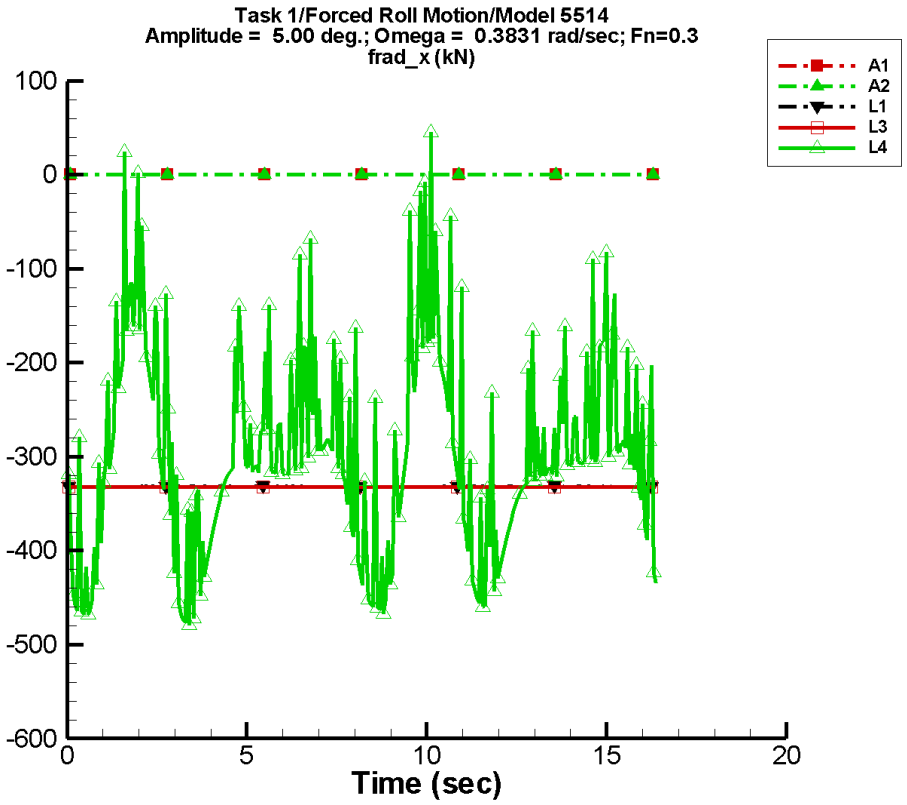
Figure D–410. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–819. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.96E-04 | 0.101 | -167 | 1.21E-03 | 94 |
| A2 | -1.96E-04 | 0.101 | -167 | 1.21E-03 | 94 |
| FD | — | — | — | — | — |
| L1 | -339. | 1.52E-02 | -142 | 7.99 | -106 |
| L3 | -339. | 1.20E-02 | -134 | 7.99 | -106 |
| L4 | -297. | 46.1 | -62 | 109. | 161 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–820. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.272 | 0.269 | -0.134 | 0.133 |
| A2 | -0.272 | 0.269 | -0.134 | 0.133 |
| FD | — | — | — | — |
| L1 | -347. | -331. | -347. | -331. |
| L3 | -347. | -331. | -347. | -331. |
| L4 | -761. | 134. | -477. | -29.7 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

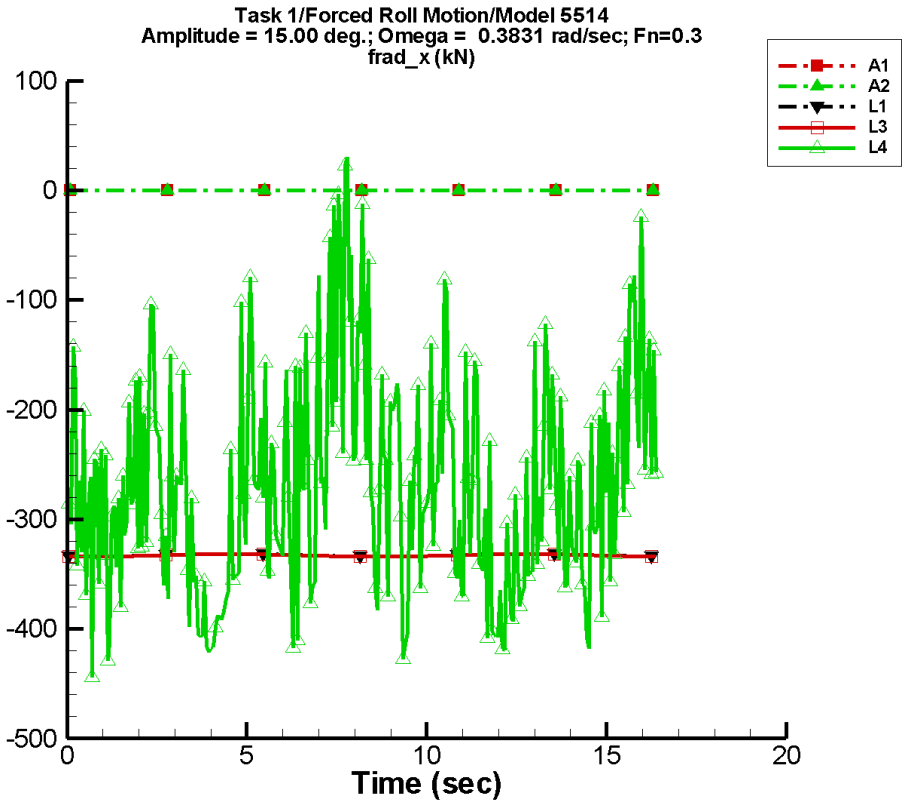
Figure D–411. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–821. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.41E-04 | 7.57E-03 | -173 | 1.41E-03 | 152 |
| A2 | 1.41E-04 | 7.57E-03 | -173 | 1.41E-03 | 152 |
| FD | — | — | — | — | — |
| L1 | -332. | 1.97E-03 | 124 | 0.131 | -110 |
| L3 | -332. | 3.57E-03 | 138 | 0.130 | -110 |
| L4 | -293. | 10.8 | -5 | 11.1 | 4 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–822. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.00E-02 | 1.70E-02 | -9.10E-03 | 7.50E-03 |
| A2 | -2.00E-02 | 1.70E-02 | -9.10E-03 | 7.50E-03 |
| FD | — | — | — | — |
| L1 | -332. | -332. | -332. | -332. |
| L3 | -332. | -332. | -332. | -332. |
| L4 | -479. | 56.2 | -439. | -87.4 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

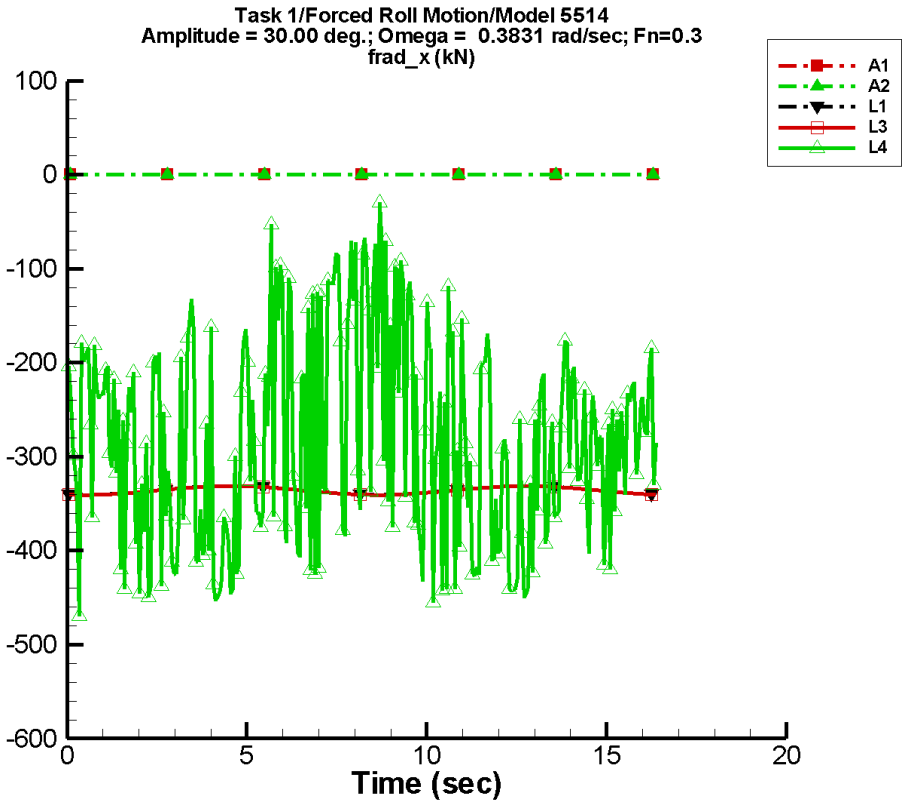
Figure D–412. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–823. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.22E-04 | 2.27E-02 | -173 | 4.23E-03 | 152 |
| A2 | 4.22E-04 | 2.27E-02 | -173 | 4.23E-03 | 152 |
| FD | — | — | — | — | — |
| L1 | -333. | 8.42E-04 | -160 | 1.18 | -110 |
| L3 | -333. | 2.63E-03 | 169 | 1.18 | -110 |
| L4 | -270. | 21.4 | -89 | 52.8 | 105 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–824. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -5.98E-02 | 5.09E-02 | -2.73E-02 | 2.25E-02 |
| A2 | -5.98E-02 | 5.09E-02 | -2.73E-02 | 2.25E-02 |
| FD | — | — | — | — |
| L1 | -334. | -331. | -334. | -332. |
| L3 | -334. | -332. | -334. | -332. |
| L4 | -444. | 30.4 | -405. | -83.5 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

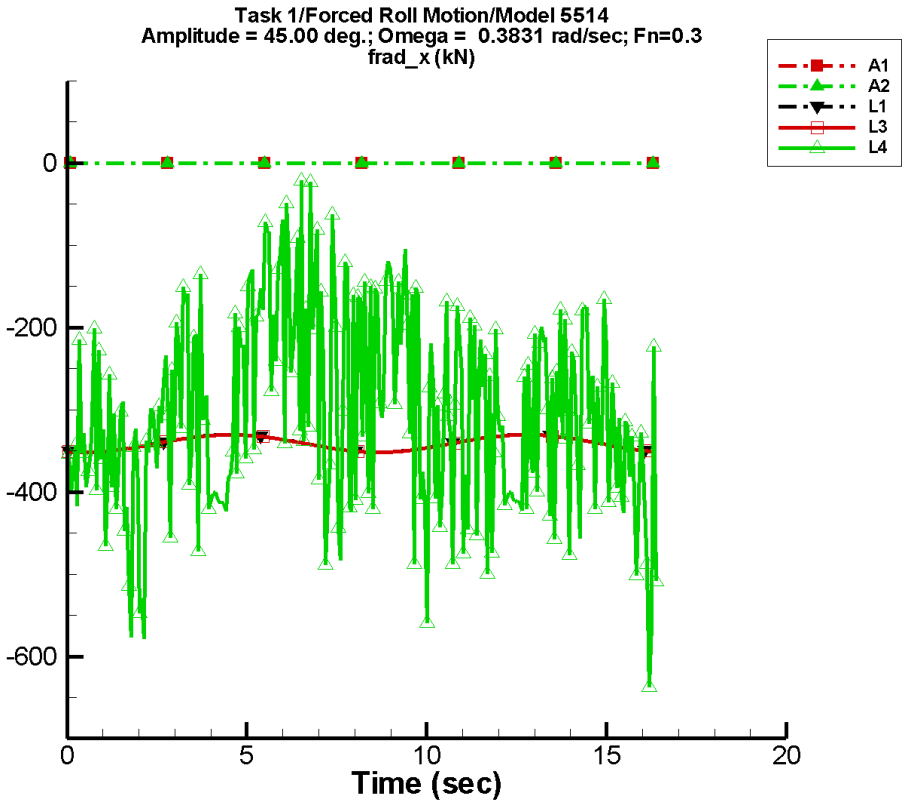
Figure D–413. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–825. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.44E-04 | 4.54E-02 | -173 | 8.46E-03 | 152 |
| A2 | 8.44E-04 | 4.54E-02 | -173 | 8.46E-03 | 152 |
| FD | — | — | — | — | — |
| L1 | -336. | 2.90E-03 | -125 | 4.73 | -110 |
| L3 | -336. | 4.05E-03 | -164 | 4.73 | -110 |
| L4 | -281. | 35.8 | -87 | 61.5 | 96 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–826. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.120 | 0.102 | -5.46E-02 | 4.50E-02 |
| A2 | -0.120 | 0.102 | -5.46E-02 | 4.50E-02 |
| FD | — | — | — | — |
| L1 | -341. | -331. | -341. | -331. |
| L3 | -341. | -331. | -341. | -331. |
| L4 | -470. | -29.5 | -415. | -147. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

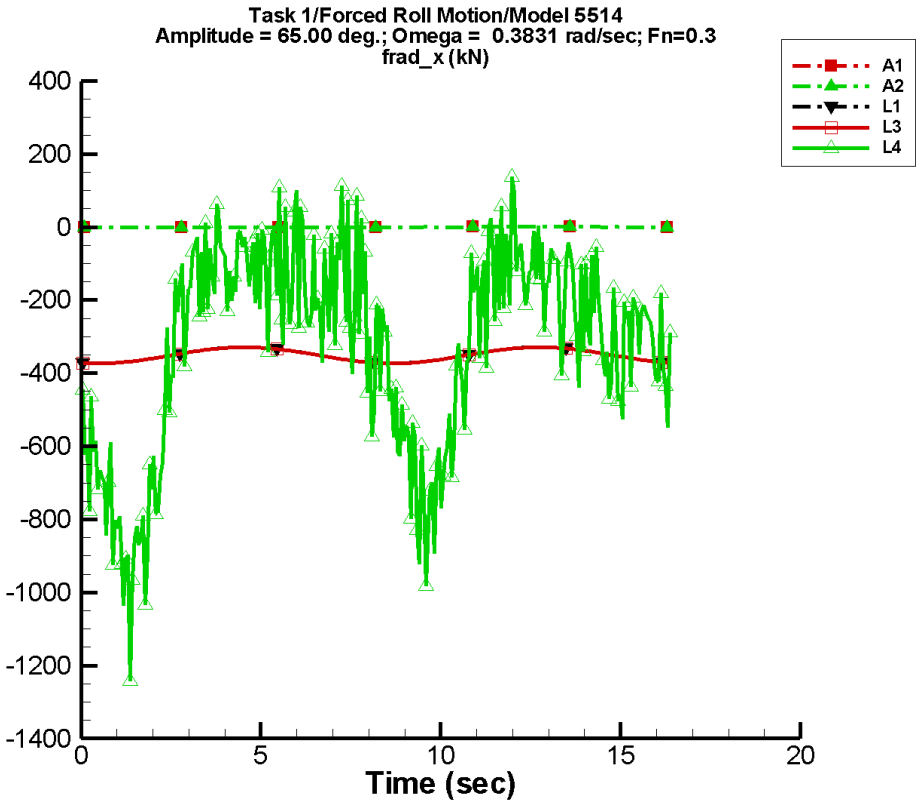
Figure D–414. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–827. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.27E-03 | 6.81E-02 | -173 | 1.27E-02 | 152 |
| A2 | 1.27E-03 | 6.81E-02 | -173 | 1.27E-02 | 152 |
| FD | — | — | — | — | — |
| L1 | -341. | 5.47E-03 | -111 | 10.6 | -110 |
| L3 | -341. | 5.77E-03 | -145 | 10.6 | -110 |
| L4 | -306. | 70.1 | -79 | 43.7 | -179 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–828. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.179 | 0.153 | -8.19E-02 | 6.75E-02 |
| A2 | -0.179 | 0.153 | -8.19E-02 | 6.75E-02 |
| FD | — | — | — | — |
| L1 | -352. | -330. | -352. | -330. |
| L3 | -352. | -330. | -352. | -331. |
| L4 | -655. | -21.6 | -567. | -154. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

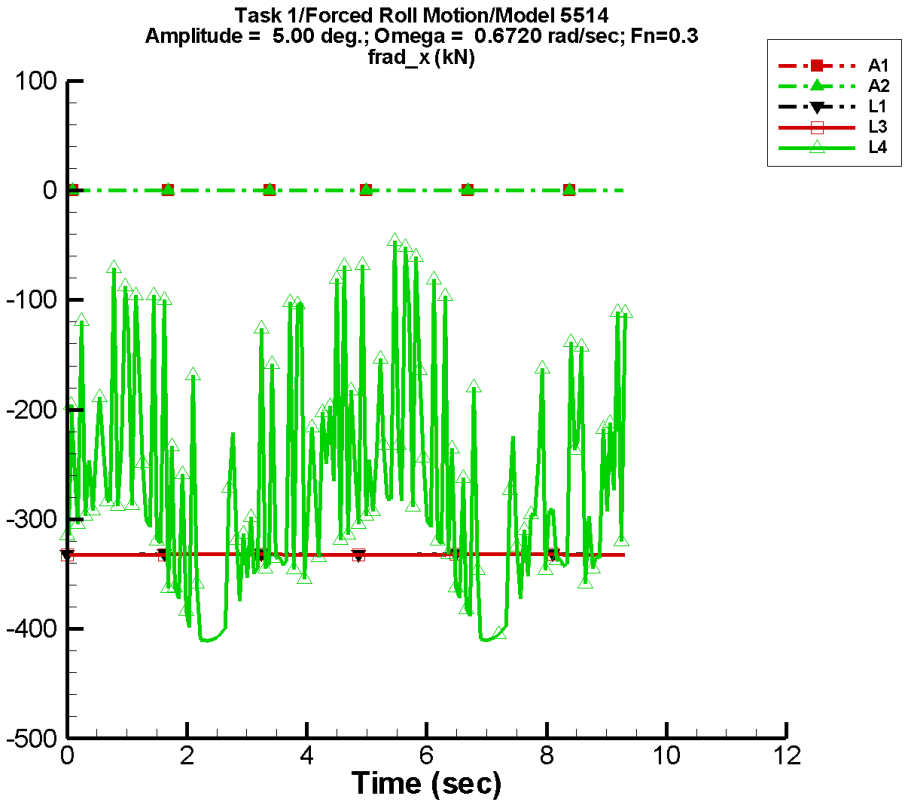
Figure D–415. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–829. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.83E-03 | 9.84E-02 | -173 | 1.83E-02 | 152 |
| A2 | 1.83E-03 | 9.84E-02 | -173 | 1.83E-02 | 152 |
| FD | — | — | — | — | — |
| L1 | -351. | 8.99E-03 | -108 | 22.2 | -110 |
| L3 | -351. | 8.77E-03 | -136 | 22.2 | -110 |
| L4 | -334. | 100. | -94 | 309. | -137 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–830. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.259 | 0.221 | -0.118 | 9.74E-02 |
| A2 | -0.259 | 0.221 | -0.118 | 9.74E-02 |
| FD | — | — | — | — |
| L1 | -373. | -329. | -373. | -329. |
| L3 | -373. | -329. | -373. | -329. |
| L4 | -1.24E+03 | 137. | -1.01E+03 | -55.3 |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

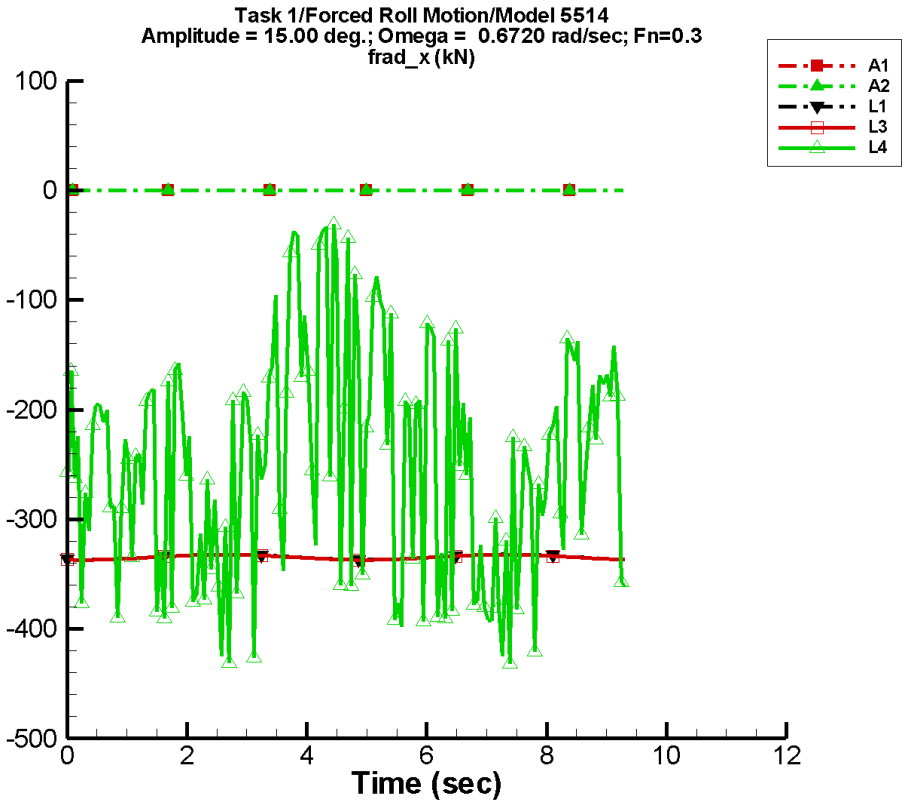
Figure D–416. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–831. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.65E-05 | 1.73E-02 | 140 | 3.73E-04 | 78 |
| A2 | -2.65E-05 | 1.73E-02 | 140 | 3.73E-04 | 78 |
| FD | — | — | — | — | — |
| L1 | -332. | 2.82E-03 | 172 | 0.266 | -112 |
| L3 | -332. | 3.01E-03 | 175 | 0.266 | -112 |
| L4 | -271. | 8.56 | -81 | 68.2 | 59 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–832. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.59E-02 | 1.96E-02 | -1.76E-02 | 1.73E-02 |
| A2 | -2.59E-02 | 1.96E-02 | -1.76E-02 | 1.73E-02 |
| FD | — | — | — | — |
| L1 | -332. | -332. | -332. | -332. |
| L3 | -332. | -332. | -332. | -332. |
| L4 | -411. | -46.3 | -387. | -176. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

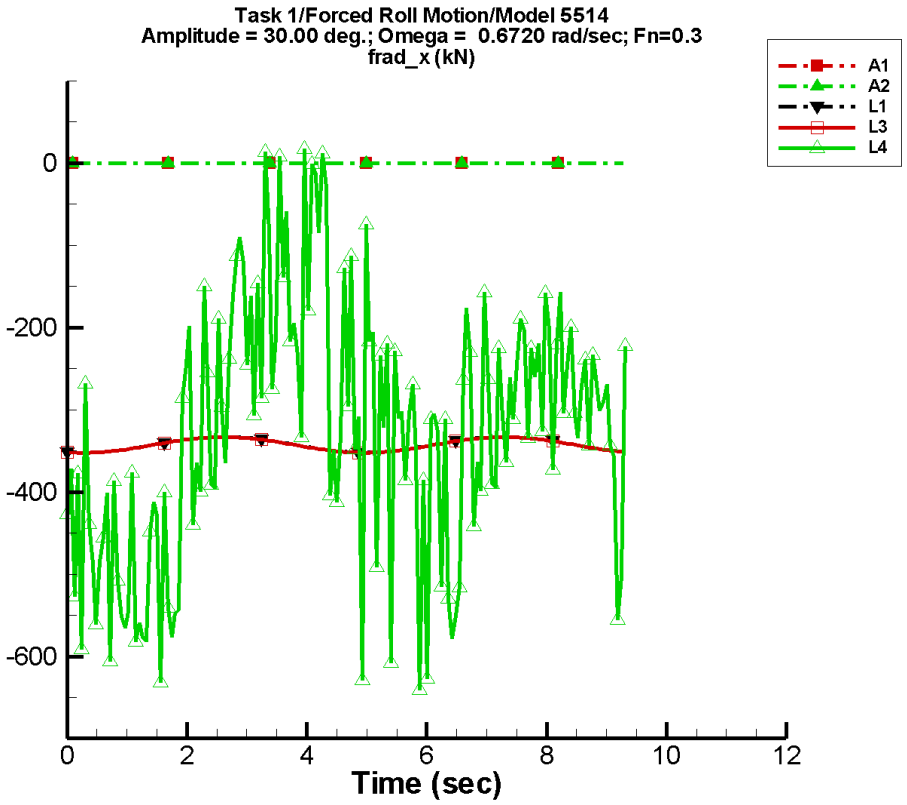
Figure D–417. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–833. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -7.96E-05 | 5.20E-02 | 140 | 1.12E-03 | 78 |
| A2 | -7.96E-05 | 5.20E-02 | 140 | 1.12E-03 | 78 |
| FD | — | — | — | — | — |
| L1 | -334. | 5.18E-03 | -151 | 2.39 | -112 |
| L3 | -335. | 4.80E-03 | -161 | 2.39 | -112 |
| L4 | -248. | 34.0 | -73 | 59.5 | 104 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–834. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -7.78E-02 | 5.87E-02 | -5.29E-02 | 5.17E-02 |
| A2 | -7.78E-02 | 5.87E-02 | -5.29E-02 | 5.17E-02 |
| FD | — | — | — | — |
| L1 | -337. | -332. | -337. | -332. |
| L3 | -337. | -332. | -337. | -332. |
| L4 | -431. | -30.7 | -373. | -137. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

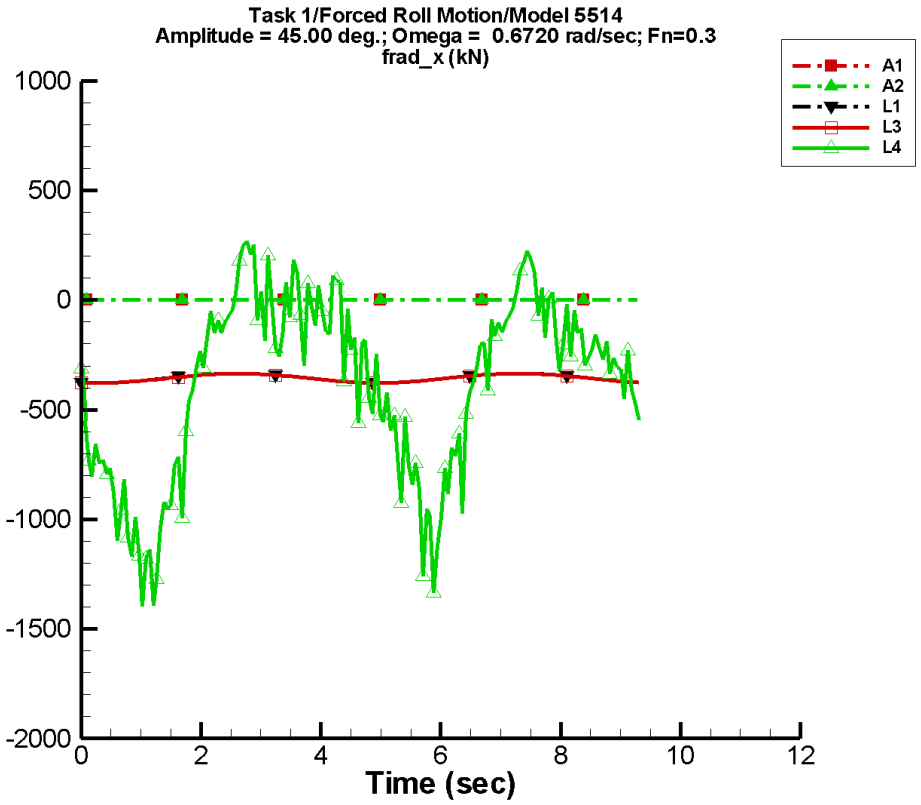
Figure D–418. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–835. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.59E-04 | 0.104 | 140 | 2.24E-03 | 78 |
| A2 | -1.59E-04 | 0.104 | 140 | 2.24E-03 | 78 |
| FD | — | — | — | — | — |
| L1 | -343. | 1.01E-02 | -140 | 9.56 | -112 |
| L3 | -343. | 8.47E-03 | -147 | 9.56 | -112 |
| L4 | -321. | 77.5 | -88 | 135. | 178 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–836. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.156 | 0.117 | -0.106 | 0.103 |
| A2 | -0.156 | 0.117 | -0.106 | 0.103 |
| FD | — | — | — | — |
| L1 | -352. | -333. | -352. | -333. |
| L3 | -352. | -333. | -352. | -333. |
| L4 | -649. | 17.3 | -561. | -106. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

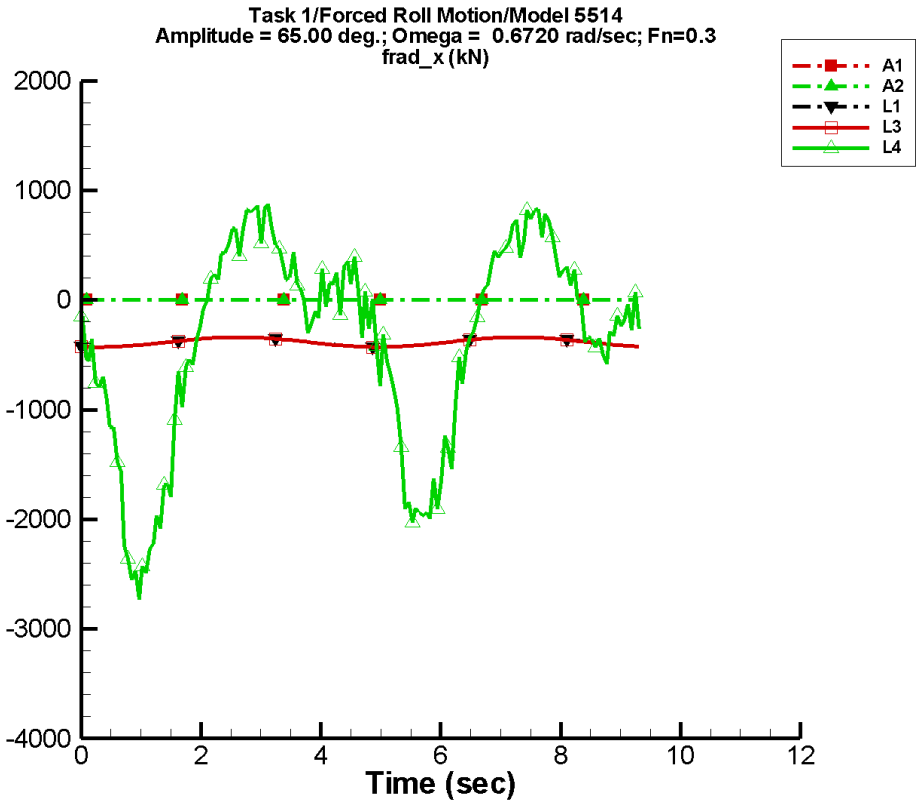
Figure D–419. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–837. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.39E-04 | 0.156 | 140 | 3.36E-03 | 78 |
| A2 | -2.39E-04 | 0.156 | 140 | 3.36E-03 | 78 |
| FD | — | — | — | — | — |
| L1 | -356. | 1.56E-02 | -136 | 21.5 | -112 |
| L3 | -356. | 1.23E-02 | -142 | 21.5 | -112 |
| L4 | -395. | 124. | -100 | 515. | -163 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–838. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.233 | 0.176 | -0.159 | 0.155 |
| A2 | -0.233 | 0.176 | -0.159 | 0.155 |
| FD | — | — | — | — |
| L1 | -378. | -335. | -378. | -335. |
| L3 | -378. | -335. | -378. | -335. |
| L4 | -1.49E+03 | 269. | -1.22E+03 | 138. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from FREDYN, NFA and NSHIPMO.

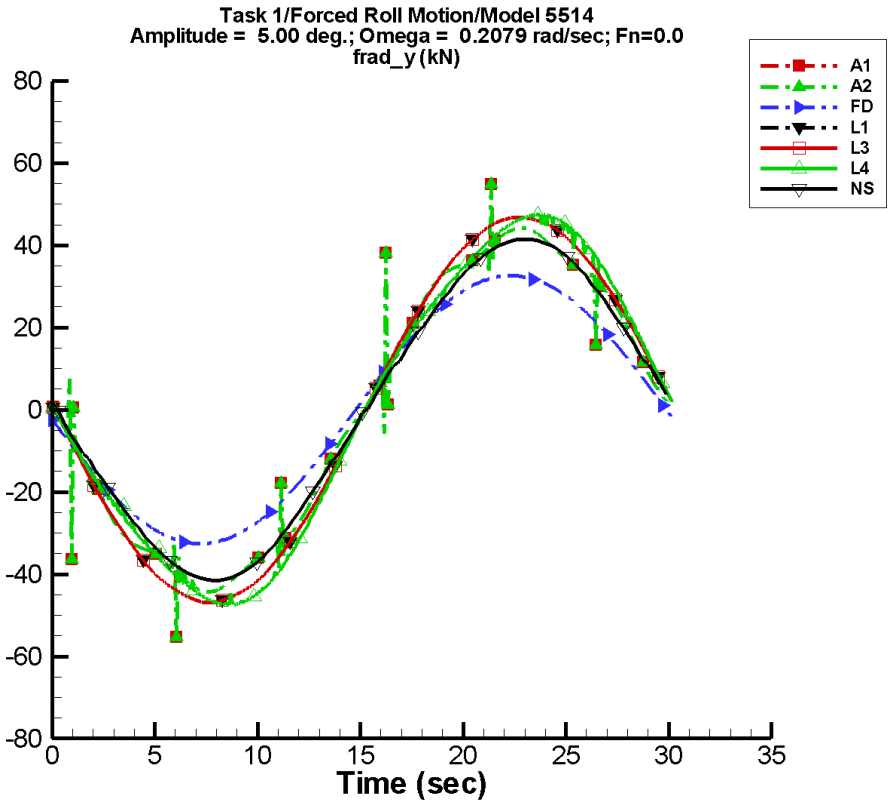
Figure D–420. Time history of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–839. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.45E-04 | 0.225 | 140 | 4.85E-03 | 78 |
| A2 | -3.45E-04 | 0.225 | 140 | 4.85E-03 | 78 |
| FD | — | — | — | — | — |
| L1 | -383. | 2.23E-02 | -135 | 44.9 | -112 |
| L3 | -383. | 1.76E-02 | -142 | 44.9 | -112 |
| L4 | -391. | 222. | -117 | 1.14E+03 | -161 |
| NF | — | — | — | — | — |
| NS | — | — | — | — | — |

Table D–840. Minimum and maximum of of $F_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.337 | 0.254 | -0.229 | 0.224 |
| A2 | -0.337 | 0.254 | -0.229 | 0.224 |
| FD | — | — | — | — |
| L1 | -428. | -338. | -427. | -339. |
| L3 | -428. | -338. | -427. | -339. |
| L4 | -2.73E+03 | 878. | -2.43E+03 | 749. |
| NF | — | — | — | — |
| NS | — | — | — | — |




Data identically zero, insufficient, or not available from NFA.

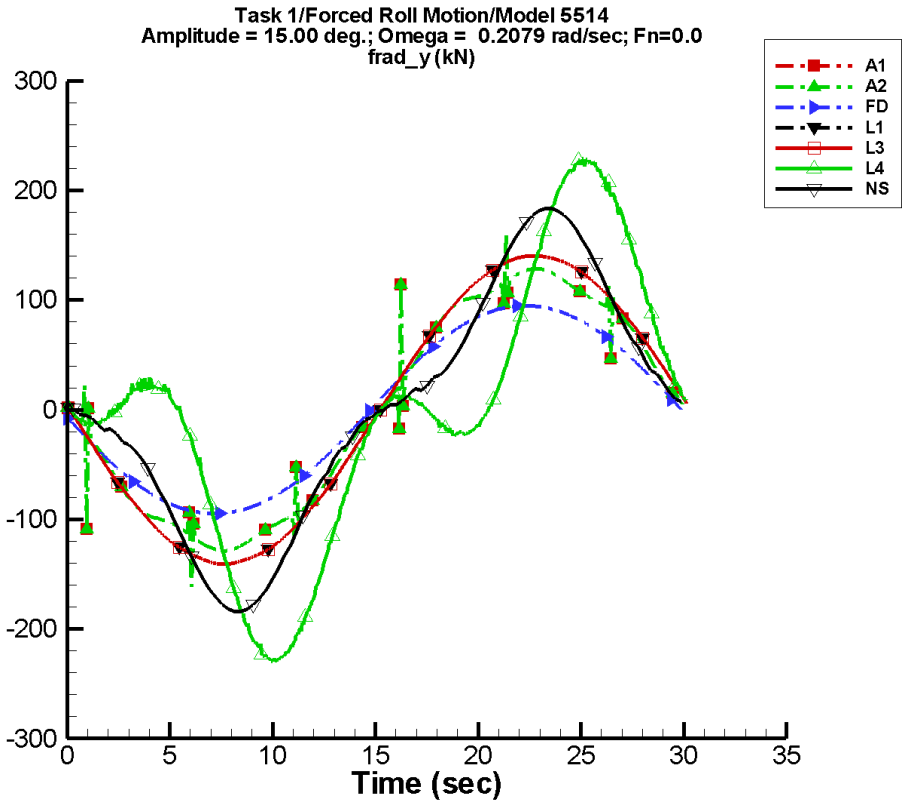
Figure D–421. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–841. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.06E-02 | 42.8 | 180 | 2.67E-02 | 175 |
| A2 | 4.06E-02 | 42.8 | 180 | 2.67E-02 | 175 |
| FD | -8.73E-04 | 32.6 | -176 | 4.80E-03 | -119 |
| L1 | 1.85E-03 | 46.8 | 179 | 1.29E-02 | 17 |
| L3 | 1.85E-03 | 46.8 | 179 | 1.29E-02 | 17 |
| L4 | -0.105 | 46.1 | 175 | 0.636 | -17 |
| NF | — | — | — | — | — |
| NS | 3.24E-03 | 40.5 | 177 | 2.28E-03 | -158 |

Table D–842. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -55.4 | 54.9 | -44.2 | 44.1 |
| A2 | -55.4 | 54.9 | -44.2 | 44.1 |
| FD | -32.6 | 32.6 | -32.6 | 32.6 |
| L1 | -46.9 | 46.8 | -46.9 | 46.8 |
| L3 | -46.9 | 46.8 | -46.9 | 46.8 |
| L4 | -47.5 | 47.6 | -47.2 | 47.3 |
| NF | — | — | — | — |
| NS | -41.5 | 41.6 | -41.0 | 41.1 |




Data identically zero, insufficient, or not available from NFA.

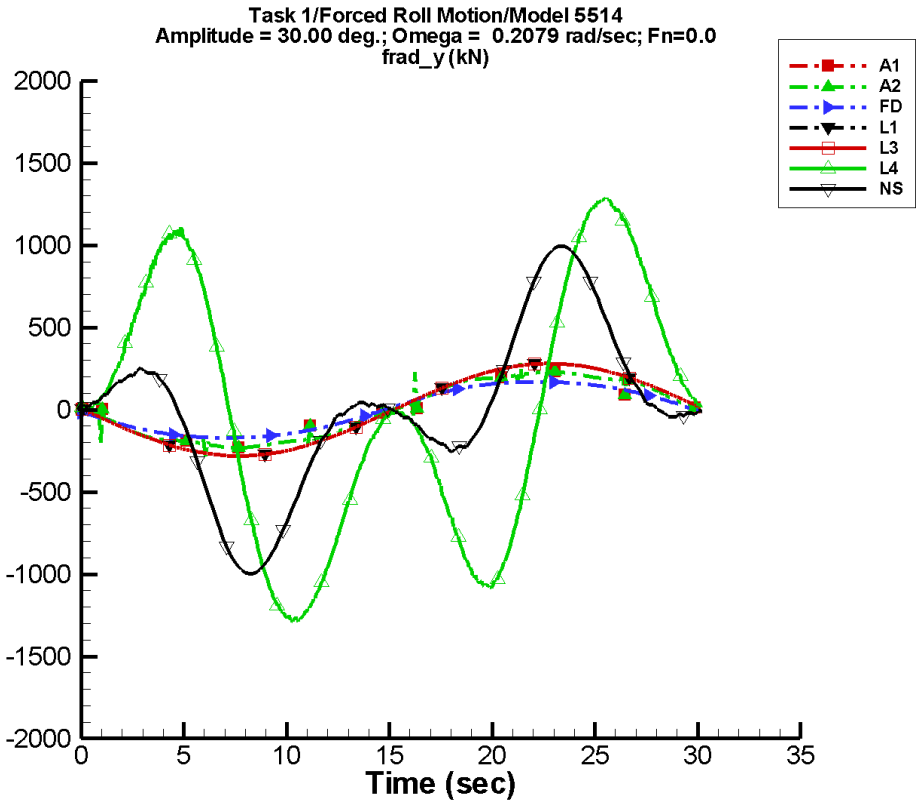
Figure D–422. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–843. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.40E-02 | 126. | 180 | 0.198 | -143 |
| A2 | 9.40E-02 | 126. | 180 | 0.198 | -143 |
| FD | -2.34E-02 | 95.6 | -176 | 0.129 | -119 |
| L1 | 5.53E-03 | 140. | 179 | 3.89E-02 | 17 |
| L3 | 5.52E-03 | 140. | 179 | 3.88E-02 | 17 |
| L4 | -3.00 | 152. | 147 | 16.1 | -22 |
| NF | — | — | — | — | — |
| NS | 8.30E-02 | 145. | 172 | 5.98E-02 | -111 |

Table D–844. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -161. | 160. | -128. | 128. |
| A2 | -161. | 160. | -128. | 128. |
| FD | -94.8 | 94.8 | -95.0 | 94.7 |
| L1 | -141. | 140. | -141. | 140. |
| L3 | -141. | 140. | -141. | 140. |
| L4 | -230. | 229. | -228. | 227. |
| NF | — | — | — | — |
| NS | -184. | 185. | -179. | 179. |




Data identically zero, insufficient, or not available from NFA.

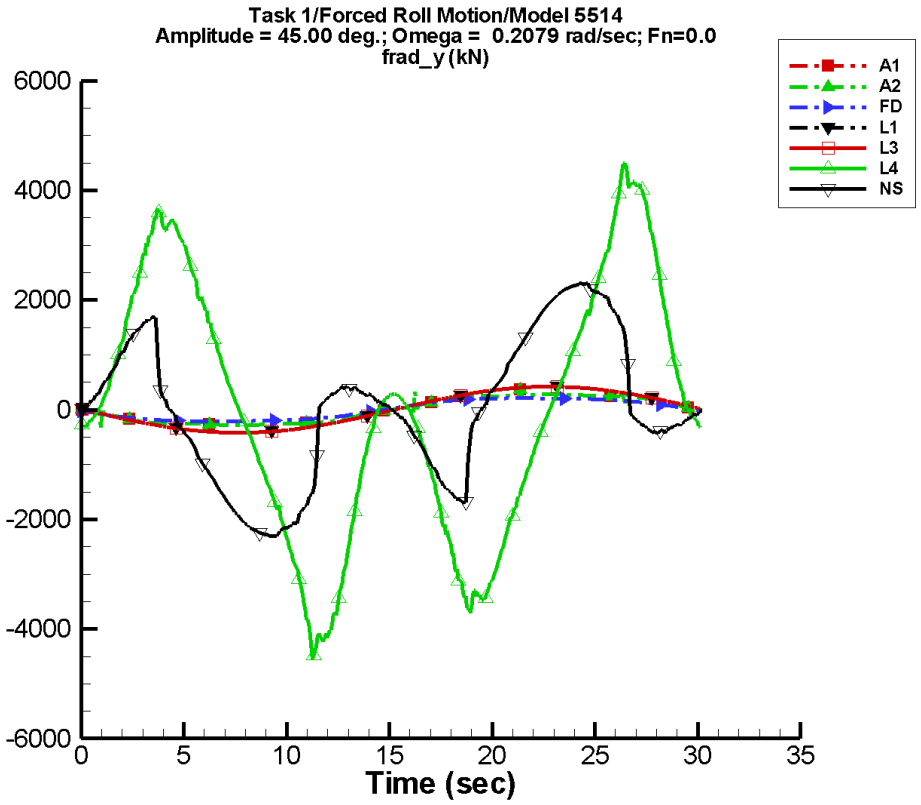
Figure D–423. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–845. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.04E-02 | 232. | -180 | 1.36 | -128 |
| A2 | 1.04E-02 | 232. | -180 | 1.36 | -128 |
| FD | -0.184 | 177. | -176 | 1.01 | -119 |
| L1 | 1.11E-02 | 281. | 179 | 7.77E-02 | 17 |
| L3 | 1.11E-02 | 281. | 179 | 7.77E-02 | 17 |
| L4 | -27.9 | 787. | 103 | 152. | -20 |
| NF | — | — | — | — | — |
| NS | 0.809 | 528. | 161 | 0.613 | -108 |

Table D–846. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -293. | 289. | -230. | 230. |
| A2 | -293. | 289. | -230. | 230. |
| FD | -170. | 170. | -171. | 170. |
| L1 | -282. | 281. | -282. | 281. |
| L3 | -282. | 281. | -282. | 281. |
| L4 | -1.29E+03 | 1.29E+03 | -1.28E+03 | 1.28E+03 |
| NF | — | — | — | — |
| NS | -997. | 1.00E+03 | -976. | 984. |




Data identically zero, insufficient, or not available from NFA.

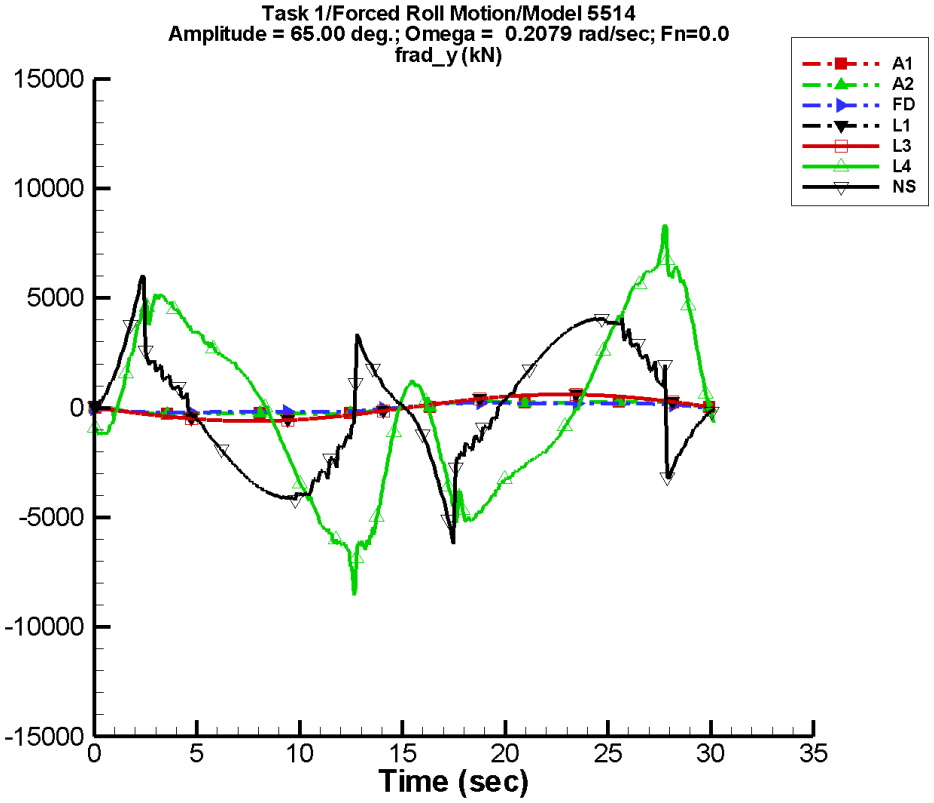
Figure D–424. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–847. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.403 | 301. | -180 | 4.35 | -125 |
| A2 | -0.403 | 301. | -180 | 4.35 | -125 |
| FD | -0.601 | 229. | -175 | 3.30 | -118 |
| L1 | 1.69E-02 | 421. | 179 | 0.117 | 17 |
| L3 | 1.70E-02 | 421. | 179 | 0.117 | 17 |
| L4 | -118. | 2.44E+03 | 91 | 498. | -35 |
| NF | — | — | — | — | — |
| NS | 2.80 | 1.24E+03 | 151 | 1.81 | -112 |

Table D–848. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -367. | 361. | -282. | 282. |
| A2 | -367. | 361. | -282. | 282. |
| FD | -210. | 210. | -210. | 210. |
| L1 | -422. | 421. | -422. | 421. |
| L3 | -422. | 421. | -422. | 421. |
| L4 | -4.56E+03 | 4.50E+03 | -4.30E+03 | 4.31E+03 |
| NF | — | — | — | — |
| NS | -2.31E+03 | 2.33E+03 | -2.28E+03 | 2.31E+03 |




Data identically zero, insufficient, or not available from NFA.

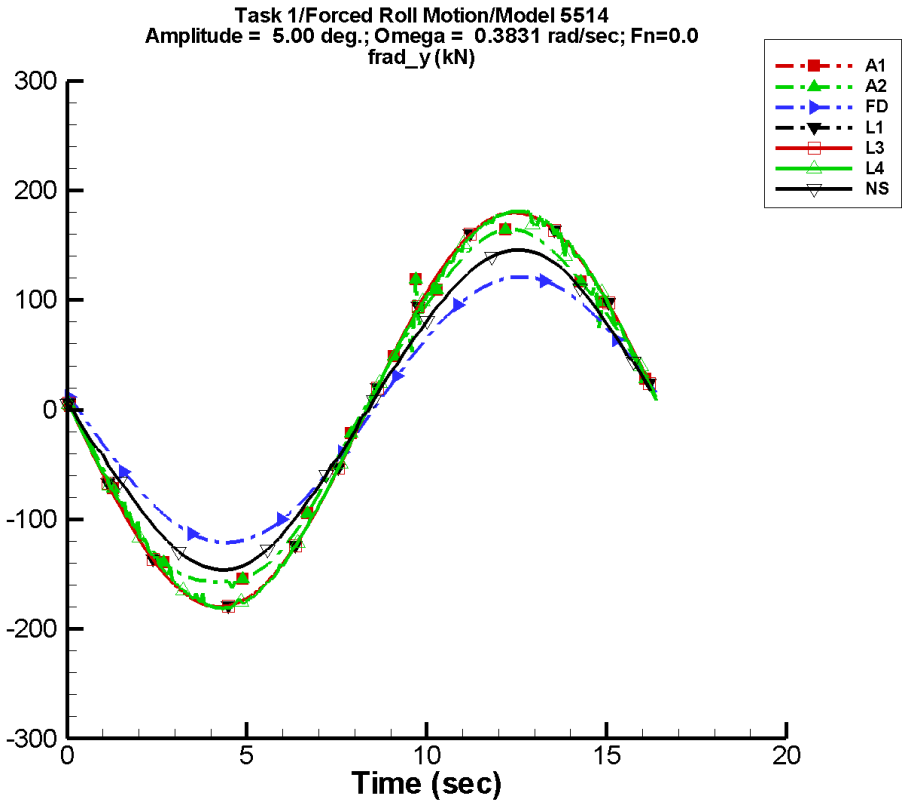
Figure D–425. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–849. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.66 | 311. | -179 | 12.2 | -123 |
| A2 | -1.66 | 311. | -179 | 12.2 | -123 |
| FD | -1.70 | 238. | -173 | 9.30 | -118 |
| L1 | 2.44E-02 | 609. | 179 | 0.168 | 17 |
| L3 | 2.45E-02 | 609. | 179 | 0.168 | 17 |
| L4 | -211. | 4.26E+03 | 91 | 780. | -52 |
| NF | — | — | — | — | — |
| NS | 4.55 | 2.37E+03 | 142 | 17.8 | 63 |

Table D–850. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -491. | 477. | -293. | 291. |
| A2 | -491. | 477. | -293. | 291. |
| FD | -223. | 223. | -223. | 223. |
| L1 | -610. | 608. | -610. | 608. |
| L3 | -610. | 608. | -610. | 608. |
| L4 | -8.54E+03 | 8.35E+03 | -7.30E+03 | 7.37E+03 |
| NF | — | — | — | — |
| NS | -6.21E+03 | 6.06E+03 | -4.78E+03 | 4.88E+03 |




Data identically zero, insufficient, or not available from NFA.

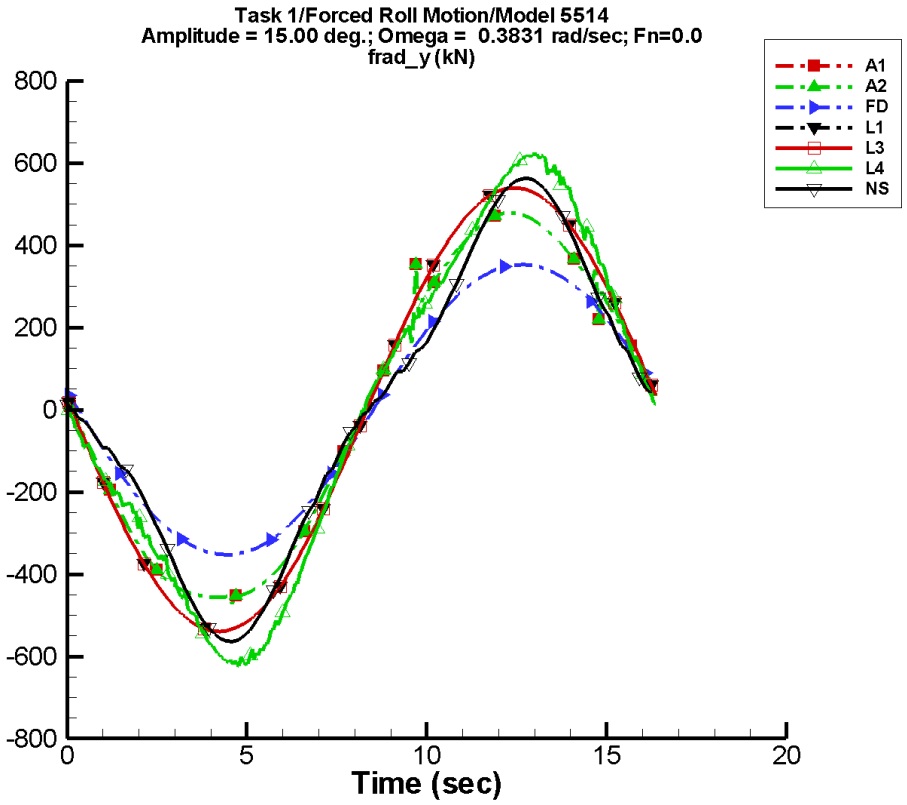
Figure D–426. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–851. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.152 | 161. | 178 | 0.393 | -146 |
| A2 | 0.152 | 161. | 178 | 0.393 | -146 |
| FD | -2.81E-03 | 121. | 173 | 2.29E-02 | -112 |
| L1 | 3.06E-03 | 180. | 177 | 3.60E-02 | 155 |
| L3 | 3.05E-03 | 180. | 177 | 3.60E-02 | 155 |
| L4 | -1.21E-02 | 178. | 177 | 0.874 | -4 |
| NF | — | — | — | — | — |
| NS | -5.45E-03 | 144. | 176 | 1.60E-02 | -20 |

Table D–852. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -174. | 165. | -160. | 164. |
| A2 | -174. | 165. | -160. | 164. |
| FD | -121. | 121. | -121. | 121. |
| L1 | -180. | 180. | -180. | 180. |
| L3 | -180. | 180. | -180. | 180. |
| L4 | -181. | 181. | -181. | 181. |
| NF | — | — | — | — |
| NS | -146. | 146. | -144. | 144. |




Data identically zero, insufficient, or not available from NFA.

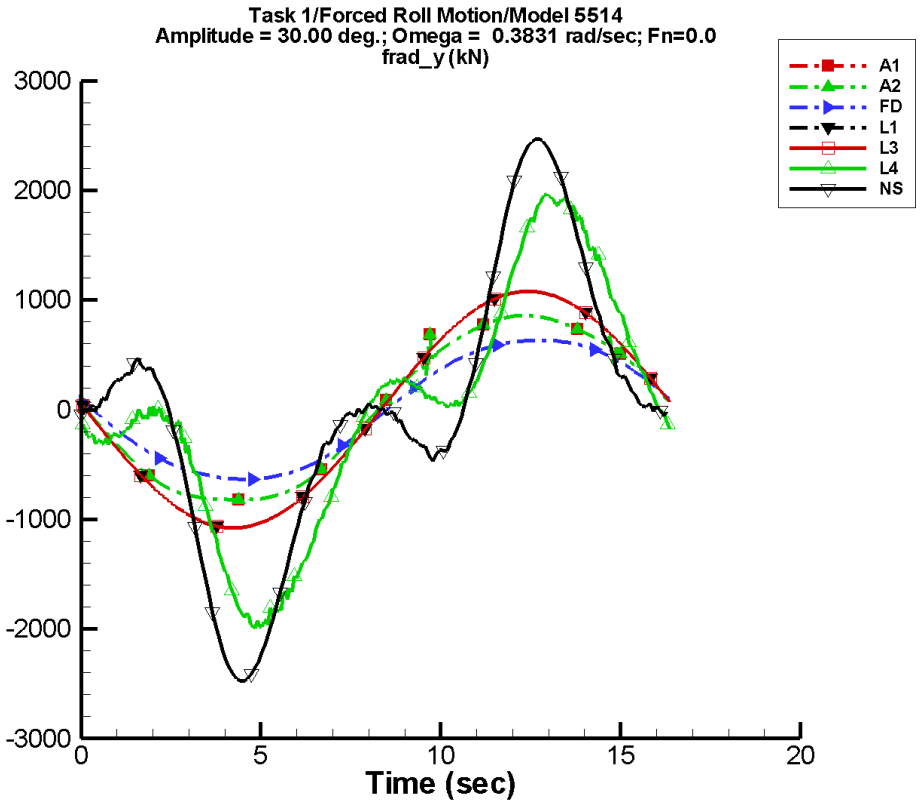
Figure D–427. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–853. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.366 | 473. | 178 | 1.70 | -140 |
| A2 | 0.366 | 473. | 178 | 1.70 | -140 |
| FD | -7.48E-02 | 356. | 173 | 0.614 | -112 |
| L1 | 9.25E-03 | 539. | 177 | 0.108 | 155 |
| L3 | 9.22E-03 | 539. | 177 | 0.108 | 155 |
| L4 | -0.692 | 556. | 173 | 8.92 | -36 |
| NF | — | — | — | — | — |
| NS | -9.69E-02 | 479. | 172 | 3.07E-02 | 84 |

Table D–854. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -506. | 479. | -466. | 477. |
| A2 | -506. | 479. | -466. | 477. |
| FD | -353. | 353. | -352. | 352. |
| L1 | -539. | 539. | -539. | 539. |
| L3 | -539. | 539. | -539. | 539. |
| L4 | -622. | 622. | -615. | 619. |
| NF | — | — | — | — |
| NS | -564. | 563. | -551. | 550. |




Data identically zero, insufficient, or not available from NFA.

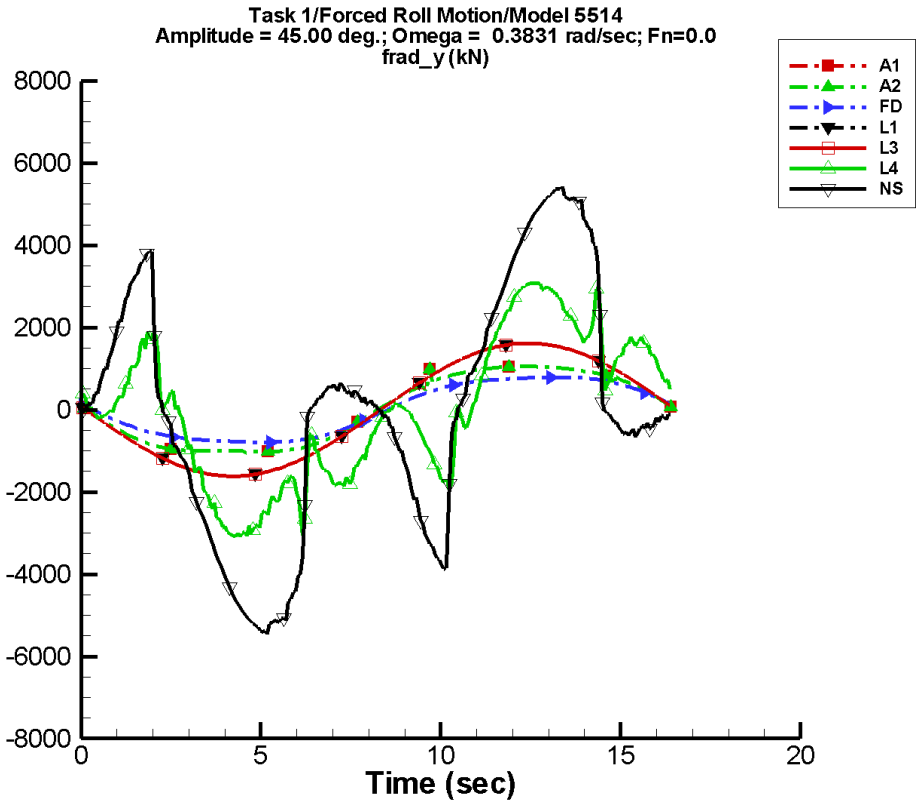
Figure D–428. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–855. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.145 | 872. | 178 | 6.94 | -133 |
| A2 | 0.145 | 872. | 178 | 6.94 | -133 |
| FD | -0.584 | 656. | 173 | 4.81 | -112 |
| L1 | 1.85E-02 | 1.08E+03 | 177 | 0.216 | 155 |
| L3 | 1.86E-02 | 1.08E+03 | 177 | 0.216 | 155 |
| L4 | -7.78 | 1.32E+03 | 162 | 60.1 | -48 |
| NF | — | — | — | — | — |
| NS | -0.831 | 1.44E+03 | 163 | 0.693 | 130 |

Table D–856. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -914. | 859. | -836. | 855. |
| A2 | -914. | 859. | -836. | 855. |
| FD | -634. | 634. | -633. | 632. |
| L1 | -1.08E+03 | 1.08E+03 | -1.08E+03 | 1.08E+03 |
| L3 | -1.08E+03 | 1.08E+03 | -1.08E+03 | 1.08E+03 |
| L4 | -1.99E+03 | 1.97E+03 | -1.95E+03 | 1.93E+03 |
| NF | — | — | — | — |
| NS | -2.48E+03 | 2.47E+03 | -2.43E+03 | 2.42E+03 |




Data identically zero, insufficient, or not available from NFA.

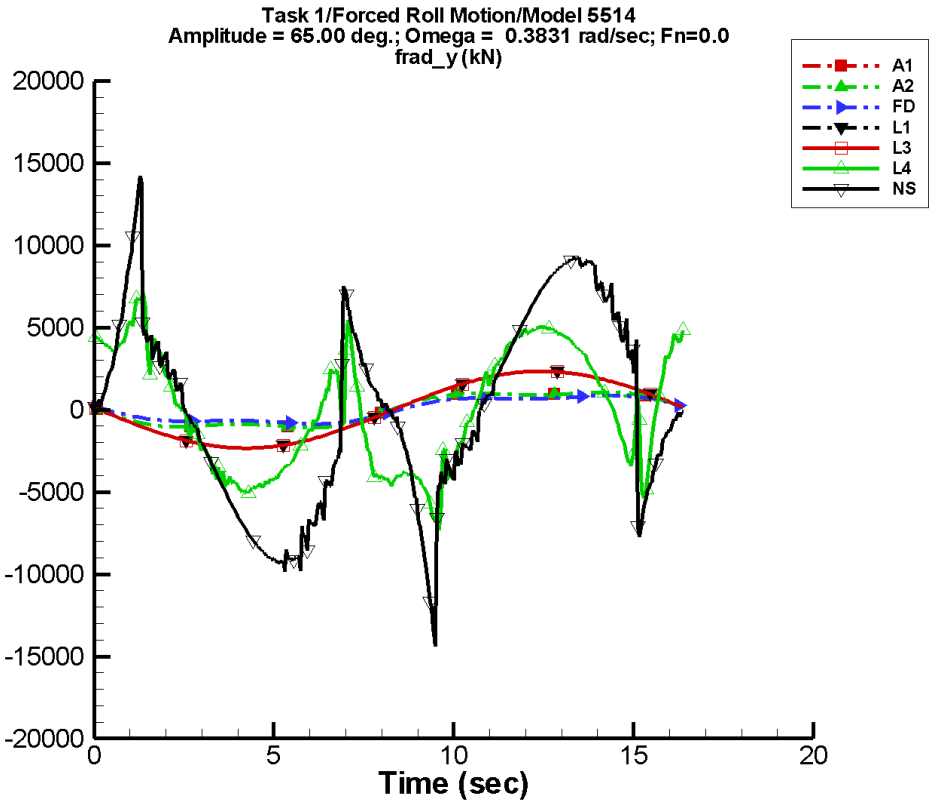
Figure D–429. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–857. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.17 | 1.13E+03 | 178 | 18.8 | -129 |
| A2 | -1.17 | 1.13E+03 | 178 | 18.8 | -129 |
| FD | -1.90 | 852. | 172 | 15.7 | -112 |
| L1 | 2.85E-02 | 1.62E+03 | 177 | 0.325 | 155 |
| L3 | 2.84E-02 | 1.62E+03 | 177 | 0.325 | 155 |
| L4 | 29.2 | 2.09E+03 | 144 | 168. | -39 |
| NF | — | — | — | — | — |
| NS | -2.52 | 2.97E+03 | 151 | 2.26 | 142 |

Table D–858. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.13E+03 | 1.05E+03 | -1.02E+03 | 1.05E+03 |
| A2 | -1.13E+03 | 1.05E+03 | -1.02E+03 | 1.05E+03 |
| FD | -789. | 789. | -788. | 788. |
| L1 | -1.62E+03 | 1.62E+03 | -1.62E+03 | 1.62E+03 |
| L3 | -1.62E+03 | 1.62E+03 | -1.62E+03 | 1.62E+03 |
| L4 | -3.09E+03 | 3.08E+03 | -3.03E+03 | 3.05E+03 |
| NF | — | — | — | — |
| NS | -5.45E+03 | 5.44E+03 | -5.33E+03 | 5.31E+03 |




Data identically zero, insufficient, or not available from NFA.

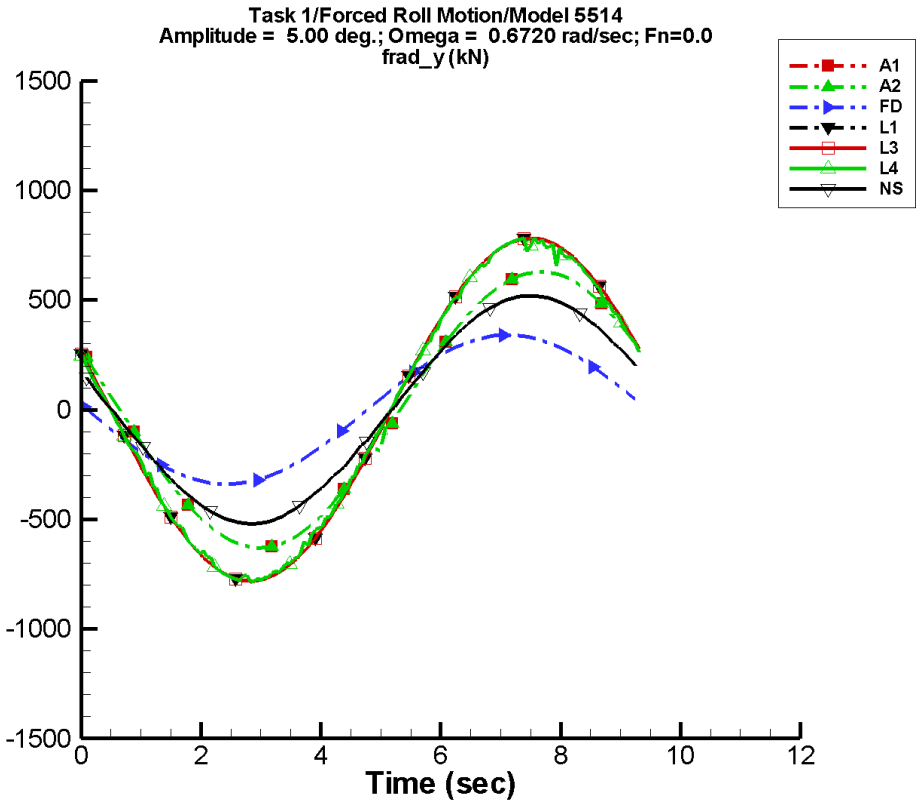
Figure D–430. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–859. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.25 | 1.17E+03 | 179 | 48.6 | -128 |
| A2 | -5.25 | 1.17E+03 | 179 | 48.6 | -128 |
| FD | -5.28 | 884. | 170 | 44.1 | -112 |
| L1 | 4.07E-02 | 2.34E+03 | 177 | 0.470 | 155 |
| L3 | 4.10E-02 | 2.34E+03 | 177 | 0.470 | 155 |
| L4 | 237. | 3.22E+03 | 121 | 499. | 20 |
| NF | — | — | — | — | — |
| NS | -3.67 | 5.26E+03 | 140 | 43.6 | 69 |

Table D–860. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.09E+03 | 1.27E+03 | -1.08E+03 | 1.04E+03 |
| A2 | -1.09E+03 | 1.27E+03 | -1.08E+03 | 1.04E+03 |
| FD | -867. | 867. | -868. | 860. |
| L1 | -2.34E+03 | 2.34E+03 | -2.33E+03 | 2.33E+03 |
| L3 | -2.34E+03 | 2.34E+03 | -2.33E+03 | 2.33E+03 |
| L4 | -7.32E+03 | 7.10E+03 | -5.81E+03 | 6.00E+03 |
| NF | — | — | — | — |
| NS | -1.44E+04 | 1.43E+04 | -1.15E+04 | 1.17E+04 |




Data identically zero, insufficient, or not available from NFA.

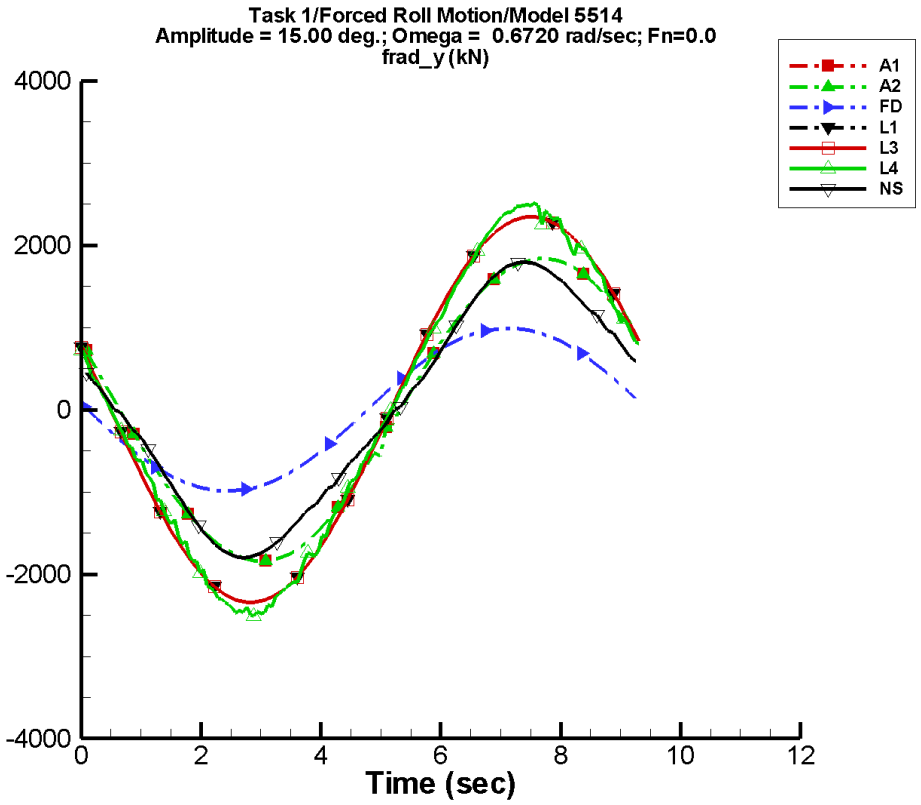
Figure D–431. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–861. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.259 | 627. | 155 | 0.868 | 62 |
| A2 | -0.259 | 627. | 155 | 0.868 | 62 |
| FD | -2.35E-02 | 340. | 176 | 4.62E-02 | -37 |
| L1 | 1.41E-02 | 781. | 161 | 4.65E-03 | -124 |
| L3 | 1.41E-02 | 781. | 161 | 4.67E-03 | -124 |
| L4 | -5.86E-02 | 767. | 161 | 3.78 | 17 |
| NF | — | — | — | — | — |
| NS | 0.274 | 516. | 161 | 0.294 | -21 |

Table D–862. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -631. | 628. | -623. | 621. |
| A2 | -631. | 628. | -623. | 621. |
| FD | -340. | 340. | -336. | 340. |
| L1 | -781. | 782. | -778. | 778. |
| L3 | -781. | 782. | -778. | 778. |
| L4 | -785. | 784. | -773. | 766. |
| NF | — | — | — | — |
| NS | -521. | 520. | -515. | 515. |




Data identically zero, insufficient, or not available from NFA.

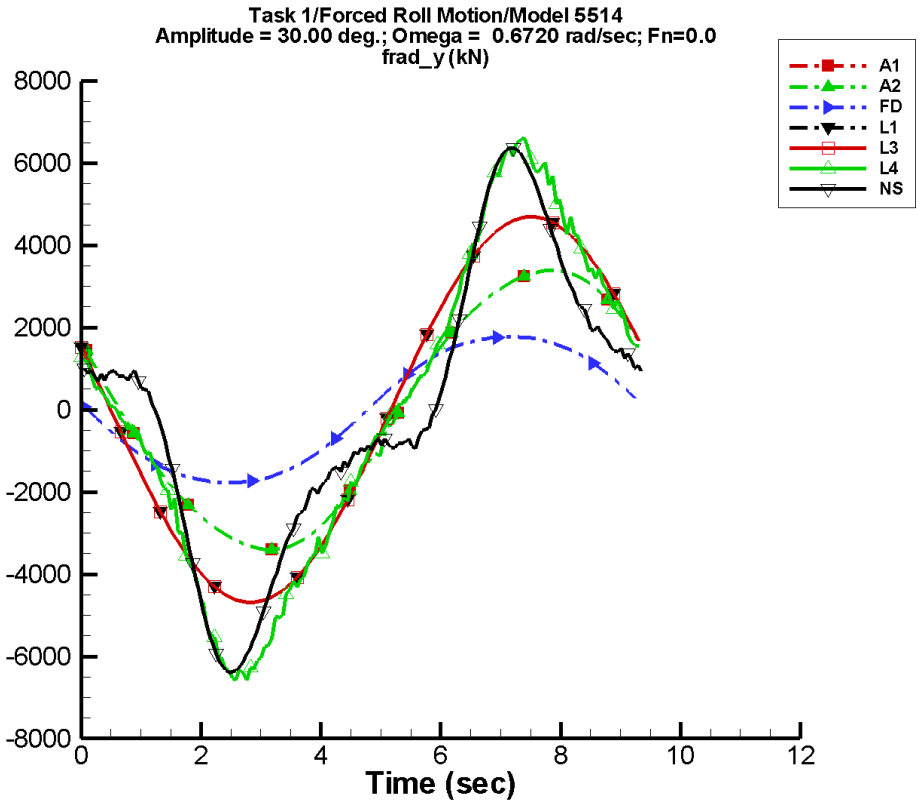
Figure D–432. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–863. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.51 | 1.84E+03 | 155 | 1.96 | 101 |
| A2 | -1.51 | 1.84E+03 | 155 | 1.96 | 101 |
| FD | -0.642 | 997. | 176 | 1.23 | -38 |
| L1 | 4.21E-02 | 2.34E+03 | 161 | 1.31E-02 | -121 |
| L3 | 4.19E-02 | 2.34E+03 | 161 | 1.30E-02 | -122 |
| L4 | 7.63 | 2.35E+03 | 161 | 28.0 | -24 |
| NF | — | — | — | — | — |
| NS | 0.491 | 1.66E+03 | 160 | 0.785 | -4 |

Table D–864. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.84E+03 | 1.84E+03 | -1.82E+03 | 1.82E+03 |
| A2 | -1.84E+03 | 1.84E+03 | -1.82E+03 | 1.82E+03 |
| FD | -989. | 989. | -978. | 990. |
| L1 | -2.34E+03 | 2.34E+03 | -2.33E+03 | 2.33E+03 |
| L3 | -2.34E+03 | 2.34E+03 | -2.33E+03 | 2.33E+03 |
| L4 | -2.51E+03 | 2.51E+03 | -2.46E+03 | 2.47E+03 |
| NF | — | — | — | — |
| NS | -1.80E+03 | 1.80E+03 | -1.77E+03 | 1.77E+03 |




Data identically zero, insufficient, or not available from NFA.

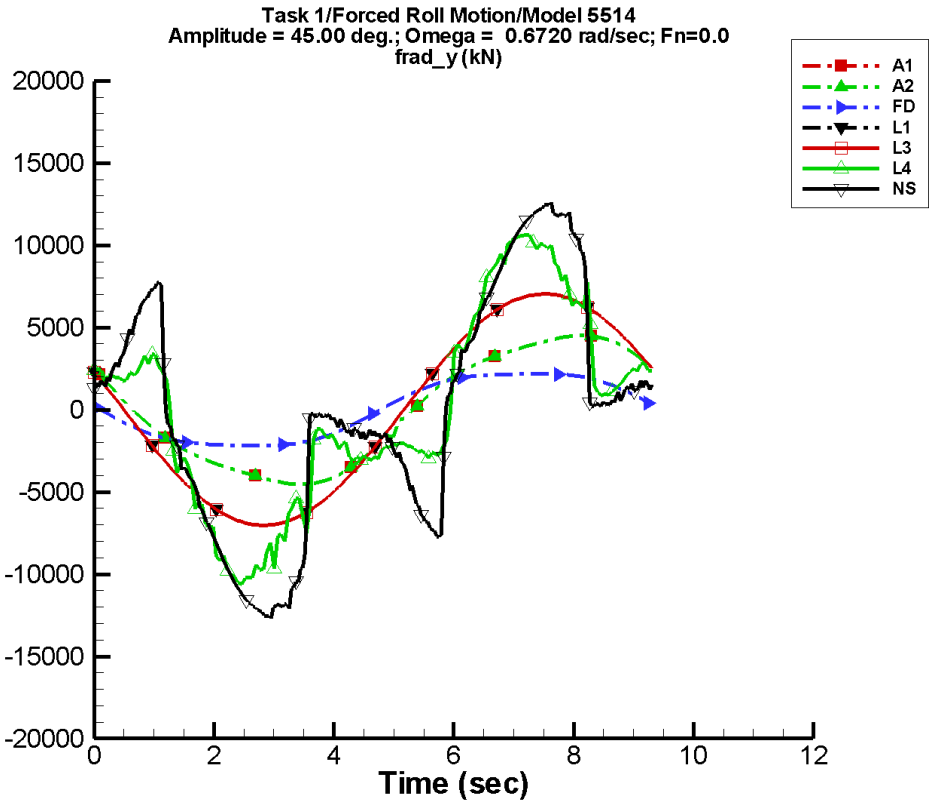
Figure D–433. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–865. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -7.84 | 3.44E+03 | 154 | 11.4 | 173 |
| A2 | -7.84 | 3.44E+03 | 154 | 11.4 | 173 |
| FD | -5.03 | 1.84E+03 | 176 | 9.67 | -38 |
| L1 | 8.57E-02 | 4.69E+03 | 161 | 2.70E-02 | -124 |
| L3 | 8.57E-02 | 4.69E+03 | 161 | 2.66E-02 | -125 |
| L4 | 22.2 | 5.26E+03 | 159 | 155. | -22 |
| NF | — | — | — | — | — |
| NS | -1.93 | 4.36E+03 | 158 | 2.76 | 57 |

Table D–866. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -3.40E+03 | 3.39E+03 | -3.36E+03 | 3.35E+03 |
| A2 | -3.40E+03 | 3.39E+03 | -3.36E+03 | 3.35E+03 |
| FD | -1.77E+03 | 1.77E+03 | -1.76E+03 | 1.78E+03 |
| L1 | -4.69E+03 | 4.69E+03 | -4.67E+03 | 4.67E+03 |
| L3 | -4.69E+03 | 4.69E+03 | -4.67E+03 | 4.67E+03 |
| L4 | -6.58E+03 | 6.61E+03 | -6.42E+03 | 6.35E+03 |
| NF | — | — | — | — |
| NS | -6.39E+03 | 6.37E+03 | -6.28E+03 | 6.26E+03 |




Data identically zero, insufficient, or not available from NFA.

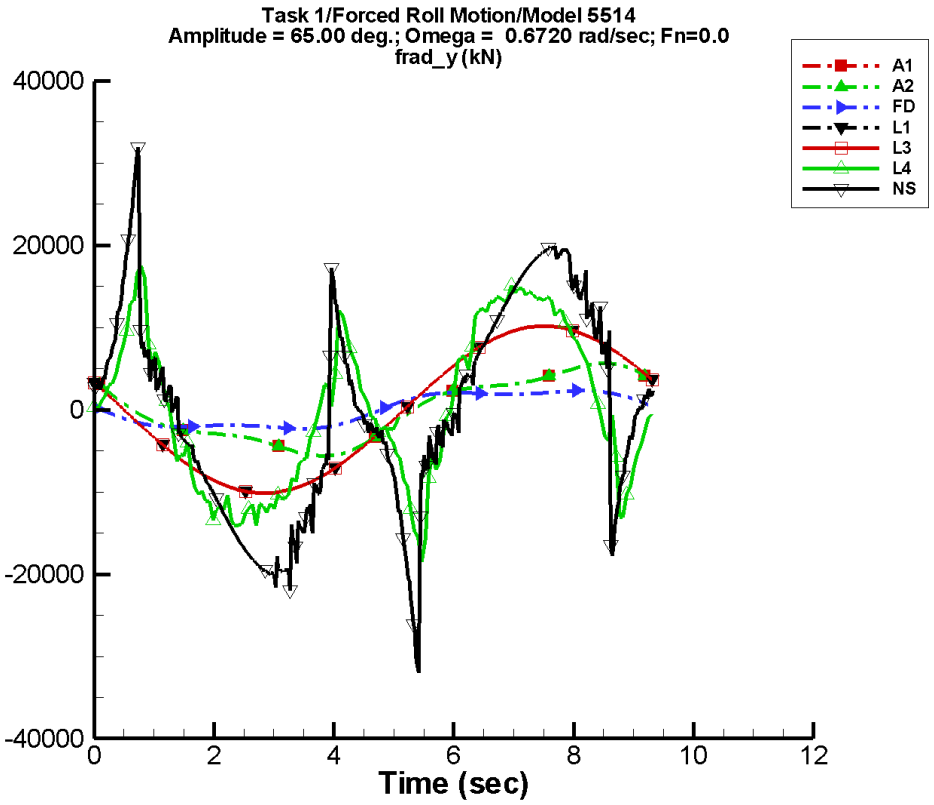
Figure D–434. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–867. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -23.2 | 4.57E+03 | 152 | 42.1 | -175 |
| A2 | -23.2 | 4.57E+03 | 152 | 42.1 | -175 |
| FD | -16.4 | 2.38E+03 | 176 | 31.5 | -38 |
| L1 | 0.130 | 7.03E+03 | 161 | 3.99E-02 | -129 |
| L3 | 0.130 | 7.03E+03 | 161 | 3.89E-02 | -130 |
| L4 | 269. | 7.25E+03 | 153 | 477. | -17 |
| NF | — | — | — | — | — |
| NS | -9.69 | 7.96E+03 | 151 | 7.03 | 53 |

Table D–868. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.53E+03 | 4.52E+03 | -4.47E+03 | 4.46E+03 |
| A2 | -4.53E+03 | 4.52E+03 | -4.47E+03 | 4.46E+03 |
| FD | -2.19E+03 | 2.19E+03 | -2.18E+03 | 2.19E+03 |
| L1 | -7.03E+03 | 7.03E+03 | -7.00E+03 | 7.00E+03 |
| L3 | -7.03E+03 | 7.03E+03 | -7.00E+03 | 7.00E+03 |
| L4 | -1.06E+04 | 1.06E+04 | -1.02E+04 | 1.04E+04 |
| NF | — | — | — | — |
| NS | -1.27E+04 | 1.26E+04 | -1.24E+04 | 1.23E+04 |




Data identically zero, insufficient, or not available from NFA.

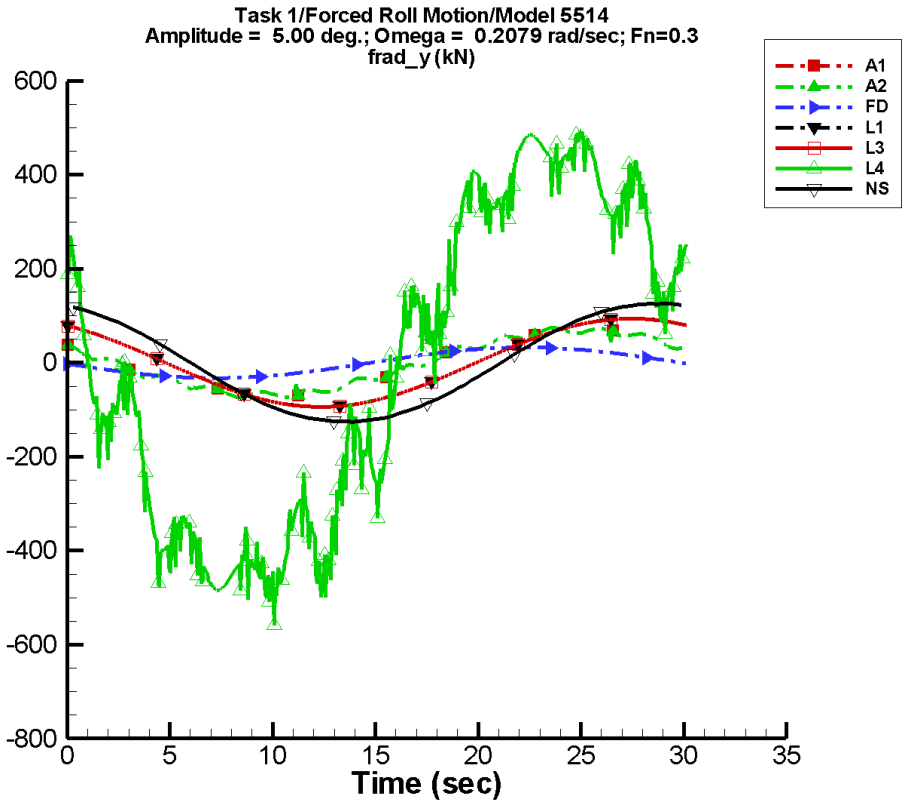
Figure D–435. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–869. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -62.5 | 5.07E+03 | 146 | 126. | -171 |
| A2 | -62.5 | 5.07E+03 | 146 | 126. | -171 |
| FD | -45.9 | 2.44E+03 | 176 | 88.6 | -39 |
| L1 | 0.191 | 1.02E+04 | 161 | 5.80E-02 | -131 |
| L3 | 0.191 | 1.02E+04 | 161 | 5.89E-02 | -131 |
| L4 | 703. | 7.70E+03 | 152 | 1.09E+03 | 3 |
| NF | — | — | — | — | — |
| NS | -45.0 | 1.21E+04 | 142 | 89.0 | 58 |

Table D–870. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -5.63E+03 | 5.64E+03 | -5.48E+03 | 5.49E+03 |
| A2 | -5.63E+03 | 5.64E+03 | -5.48E+03 | 5.49E+03 |
| FD | -2.32E+03 | 2.33E+03 | -2.27E+03 | 2.27E+03 |
| L1 | -1.02E+04 | 1.02E+04 | -1.01E+04 | 1.01E+04 |
| L3 | -1.02E+04 | 1.02E+04 | -1.01E+04 | 1.01E+04 |
| L4 | -1.85E+04 | 1.82E+04 | -1.29E+04 | 1.42E+04 |
| NF | — | — | — | — |
| NS | -3.21E+04 | 3.19E+04 | -2.55E+04 | 2.59E+04 |




Data identically zero, insufficient, or not available from NFA.

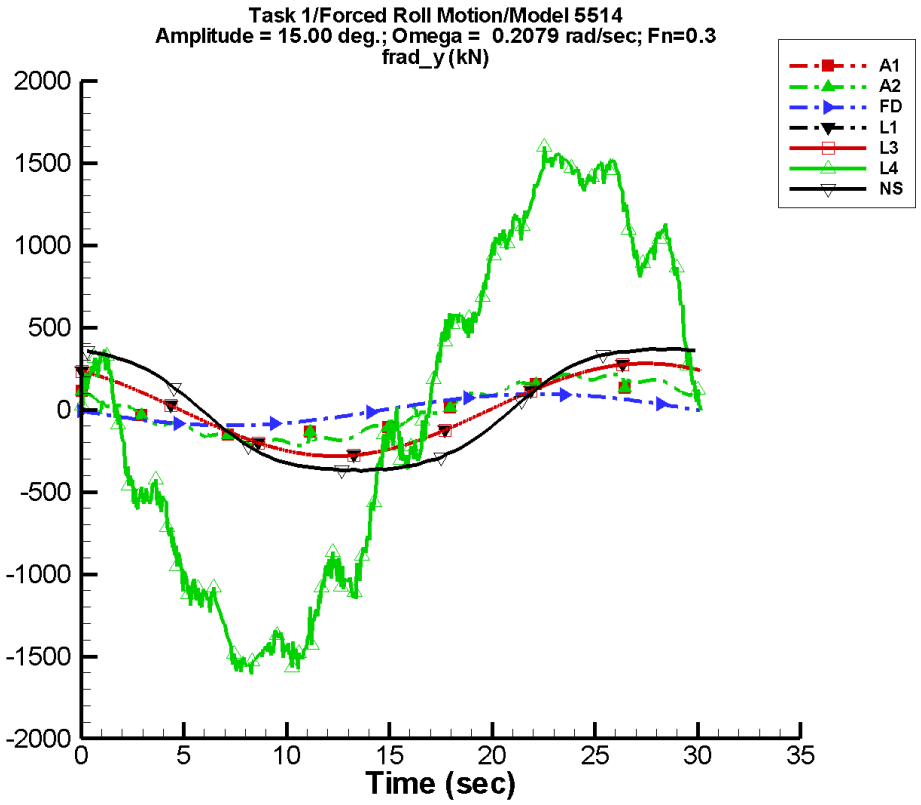
Figure D–436. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–871. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.95E-02 | 68.8 | 154 | 8.35E-02 | 172 |
| A2 | 4.95E-02 | 68.8 | 154 | 8.35E-02 | 172 |
| FD | -8.75E-04 | 32.6 | -176 | 4.80E-03 | -119 |
| L1 | -2.98E-02 | 93.9 | 123 | 5.41E-03 | 161 |
| L3 | -4.49E-02 | 93.9 | 123 | 2.61E-03 | -169 |
| L4 | -4.74 | 462. | 165 | 2.48 | 127 |
| NF | — | — | — | — | — |
| NS | 4.43E-03 | 127. | 109 | 2.70E-03 | 179 |

Table D–872. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -73.7 | 74.2 | -72.5 | 73.0 |
| A2 | -73.7 | 74.2 | -72.5 | 73.0 |
| FD | -32.6 | 32.6 | -32.6 | 32.6 |
| L1 | -93.9 | 93.9 | -93.9 | 93.8 |
| L3 | -93.9 | 93.8 | -93.9 | 93.8 |
| L4 | -559. | 494. | -493. | 482. |
| NF | — | — | — | — |
| NS | -126. | 126. | -124. | 124. |




Data identically zero, insufficient, or not available from NFA.

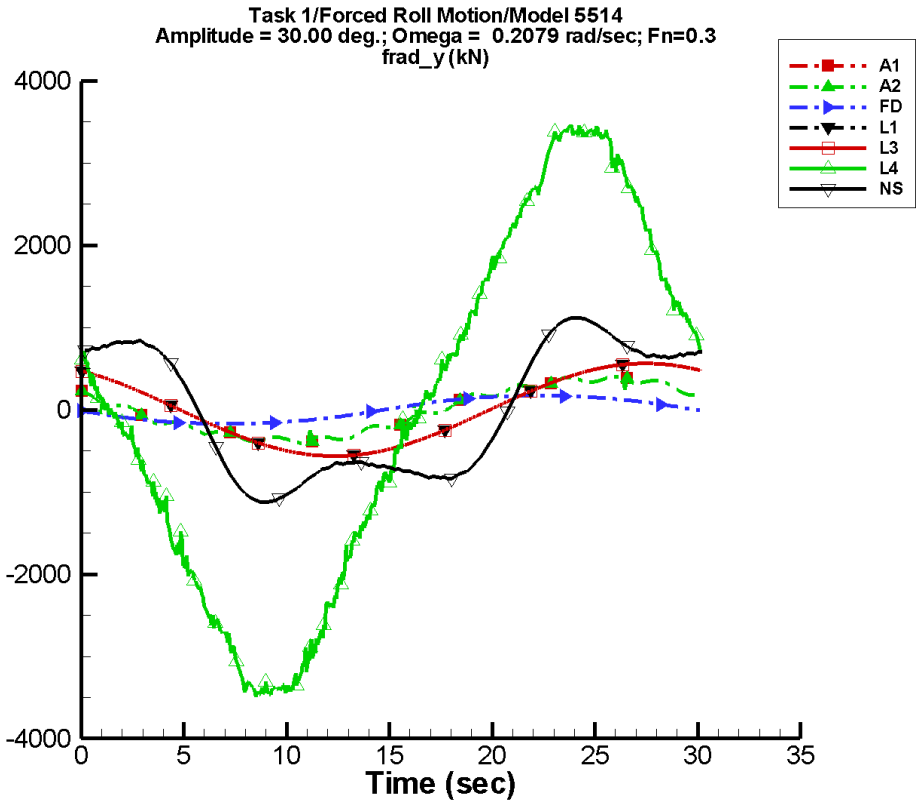
Figure D–437. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–873. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.110 | 202. | 153 | 0.412 | -171 |
| A2 | 0.110 | 202. | 153 | 0.412 | -171 |
| FD | -2.34E-02 | 95.6 | -176 | 0.129 | -119 |
| L1 | -3.02E-02 | 282. | 123 | 4.95E-03 | 164 |
| L3 | -4.50E-02 | 282. | 123 | 2.00E-03 | -162 |
| L4 | -8.33 | 1.44E+03 | 163 | 11.4 | 41 |
| NF | — | — | — | — | — |
| NS | 5.87E-02 | 401. | 111 | 5.25E-02 | -141 |

Table D–874. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum |
| Code | (kN) | (kN) | (kN) | (kN) |
| A1 | -216. | 216. | -212. | 213. |
| A2 | -216. | 216. | -212. | 213. |
| FD | -94.8 | 94.8 | -95.0 | 94.7 |
| L1 | -282. | 282. | -282. | 281. |
| L3 | -282. | 282. | -282. | 281. |
| L4 | -1.61E+03 | 1.60E+03 | -1.55E+03 | 1.53E+03 |
| NF | — | — | — | — |
| NS | -372. | 372. | -367. | 367. |




Data identically zero, insufficient, or not available from NFA.

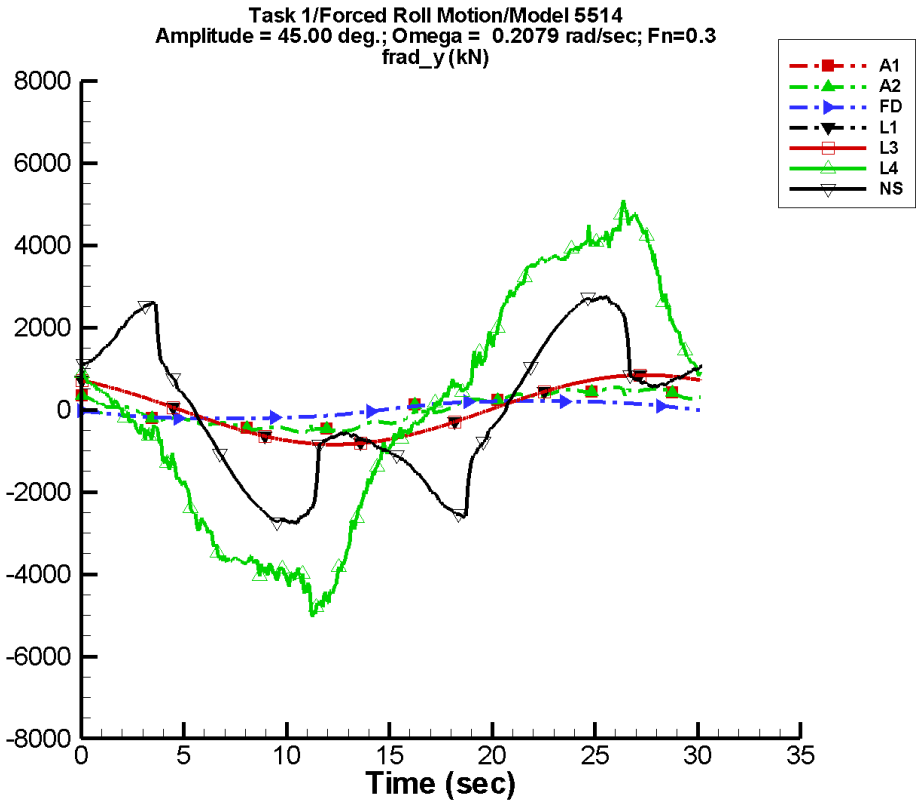
Figure D–438. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–875. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.76E-02 | 378. | 152 | 2.03 | -159 |
| A2 | -8.76E-02 | 378. | 152 | 2.03 | -159 |
| FD | -0.184 | 177. | -176 | 1.01 | -119 |
| L1 | -3.10E-02 | 563. | 123 | 4.31E-03 | 163 |
| L3 | -4.55E-02 | 563. | 123 | 1.24E-03 | -136 |
| L4 | -8.66 | 3.09E+03 | 162 | 66.1 | 28 |
| NF | — | — | — | — | — |
| NS | 0.693 | 1.01E+03 | 118 | 0.614 | -129 |

Table D–876. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -404. | 404. | -394. | 394. |
| A2 | -404. | 404. | -394. | 394. |
| FD | -170. | 170. | -171. | 170. |
| L1 | -563. | 563. | -563. | 563. |
| L3 | -563. | 563. | -563. | 563. |
| L4 | -3.50E+03 | 3.46E+03 | -3.44E+03 | 3.41E+03 |
| NF | — | — | — | — |
| NS | -1.13E+03 | 1.13E+03 | -1.11E+03 | 1.11E+03 |




Data identically zero, insufficient, or not available from NFA.

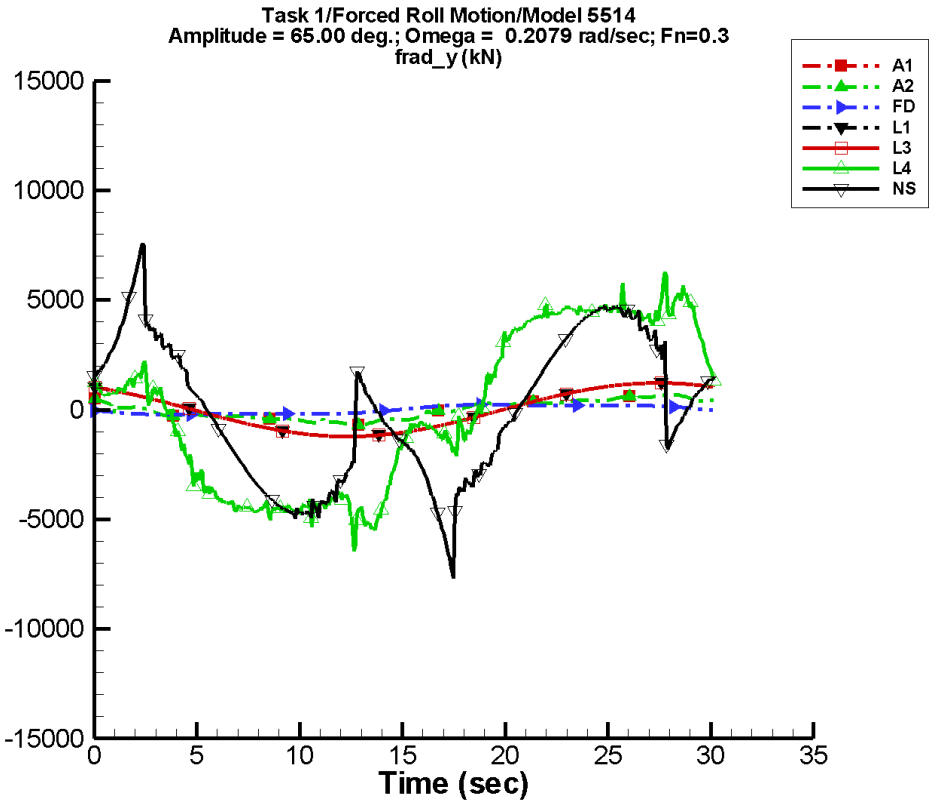
Figure D–439. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–877. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.911 | 502. | 150 | 5.95 | -156 |
| A2 | -0.911 | 502. | 150 | 5.95 | -156 |
| FD | -0.601 | 229. | -175 | 3.30 | -118 |
| L1 | -3.10E-02 | 845. | 123 | 5.87E-03 | 171 |
| L3 | -4.53E-02 | 845. | 123 | 1.96E-03 | -143 |
| L4 | -28.5 | 4.07E+03 | 155 | 128. | -38 |
| NF | — | — | — | — | — |
| NS | 2.31 | 1.98E+03 | 119 | 1.88 | -138 |

Table D–878. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -538. | 541. | -523. | 526. |
| A2 | -538. | 541. | -523. | 526. |
| FD | -210. | 210. | -210. | 210. |
| L1 | -845. | 845. | -844. | 844. |
| L3 | -845. | 845. | -845. | 844. |
| L4 | -5.05E+03 | 5.10E+03 | -4.81E+03 | 4.77E+03 |
| NF | — | — | — | — |
| NS | -2.77E+03 | 2.78E+03 | -2.71E+03 | 2.72E+03 |




Data identically zero, insufficient, or not available from NFA.

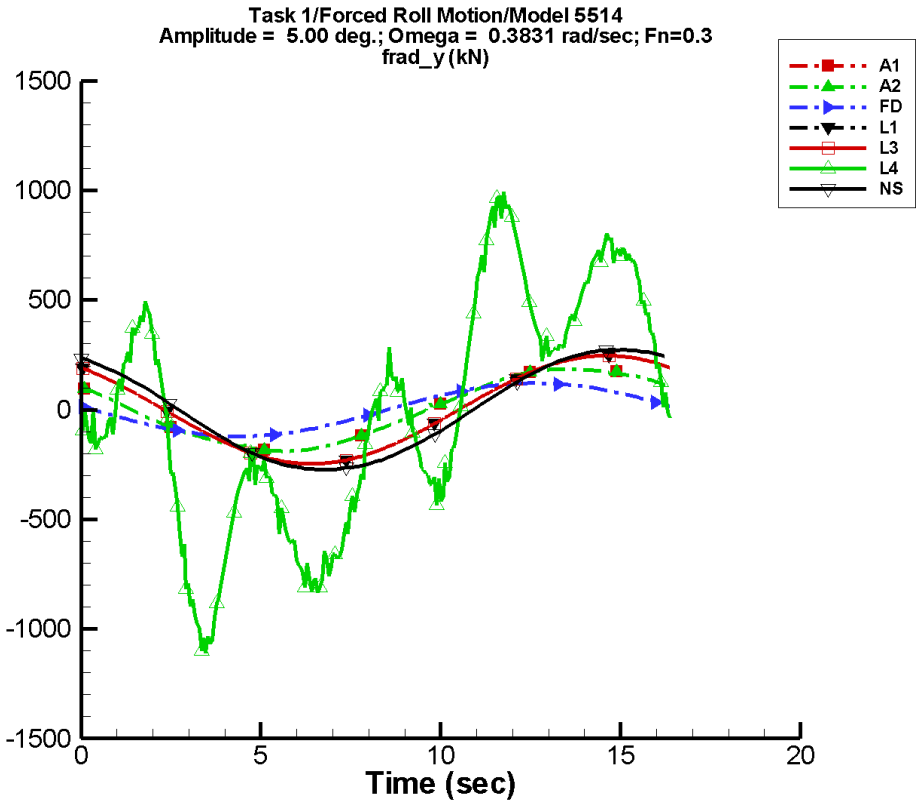
Figure D–440. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–879. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.39 | 559. | 144 | 16.0 | -155 |
| A2 | -3.39 | 559. | 144 | 16.0 | -155 |
| FD | -1.70 | 238. | -173 | 9.30 | -118 |
| L1 | -3.04E-02 | 1.22E+03 | 123 | 5.74E-03 | 162 |
| L3 | -4.44E-02 | 1.22E+03 | 123 | 5.43E-04 | -154 |
| L4 | 10.8 | 4.98E+03 | 149 | 28.5 | -173 |
| NF | — | — | — | — | — |
| NS | 7.19 | 3.56E+03 | 117 | 15.6 | 99 |

Table D–880. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -702. | 697. | -689. | 684. |
| A2 | -702. | 697. | -689. | 684. |
| FD | -223. | 223. | -223. | 223. |
| L1 | -1.22E+03 | 1.22E+03 | -1.22E+03 | 1.22E+03 |
| L3 | -1.22E+03 | 1.22E+03 | -1.22E+03 | 1.22E+03 |
| L4 | -6.44E+03 | 6.28E+03 | -5.32E+03 | 5.27E+03 |
| NF | — | — | — | — |
| NS | -7.69E+03 | 7.62E+03 | -6.47E+03 | 6.54E+03 |




Data identically zero, insufficient, or not available from NFA.

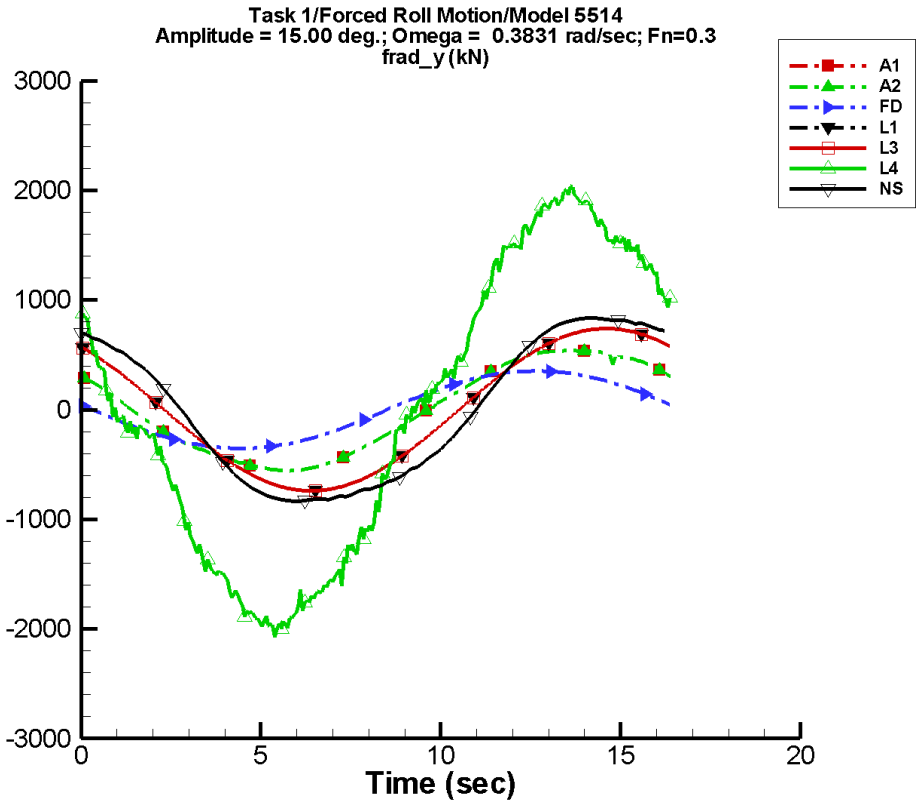
Figure D–441. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–881. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.257 | 187. | 149 | 0.390 | -143 |
| A2 | 0.257 | 187. | 149 | 0.390 | -143 |
| FD | -2.81E-03 | 121. | 173 | 2.29E-02 | -112 |
| L1 | -2.83E-02 | 247. | 129 | 3.89E-03 | -52 |
| L3 | -4.47E-02 | 247. | 129 | 1.56E-03 | -30 |
| L4 | 0.629 | 596. | 151 | 41.9 | -24 |
| NF | — | — | — | — | — |
| NS | -1.37E-02 | 276. | 121 | 2.66E-02 | -55 |

Table D–882. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -189. | 184. | -188. | 184. |
| A2 | -189. | 184. | -188. | 184. |
| FD | -121. | 121. | -121. | 121. |
| L1 | -247. | 247. | -246. | 246. |
| L3 | -247. | 247. | -246. | 246. |
| L4 | -1.11E+03 | 993. | -1.04E+03 | 932. |
| NF | — | — | — | — |
| NS | -273. | 273. | -271. | 271. |




Data identically zero, insufficient, or not available from NFA.

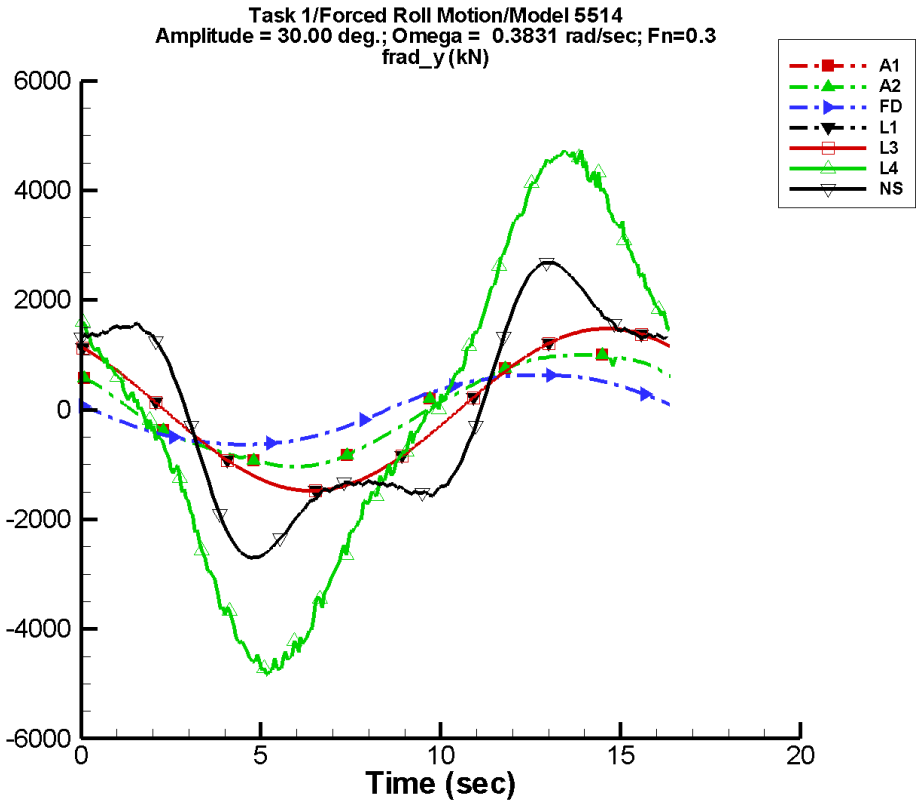
Figure D–442. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–883. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.644 | 550. | 149 | 1.64 | -149 |
| A2 | 0.644 | 550. | 149 | 1.64 | -149 |
| FD | -7.48E-02 | 356. | 173 | 0.614 | -112 |
| L1 | -2.84E-02 | 740. | 129 | 3.47E-03 | -68 |
| L3 | -4.49E-02 | 740. | 129 | 1.27E-03 | -100 |
| L4 | -11.8 | 1.85E+03 | 151 | 10.3 | -66 |
| NF | — | — | — | — | — |
| NS | -0.200 | 876. | 122 | 4.07E-02 | 62 |

Table D–884. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -557. | 538. | -554. | 538. |
| A2 | -557. | 538. | -554. | 538. |
| FD | -353. | 353. | -352. | 352. |
| L1 | -740. | 740. | -739. | 739. |
| L3 | -740. | 740. | -739. | 739. |
| L4 | -2.07E+03 | 2.04E+03 | -1.98E+03 | 1.97E+03 |
| NF | — | — | — | — |
| NS | -835. | 836. | -826. | 827. |




Data identically zero, insufficient, or not available from NFA.

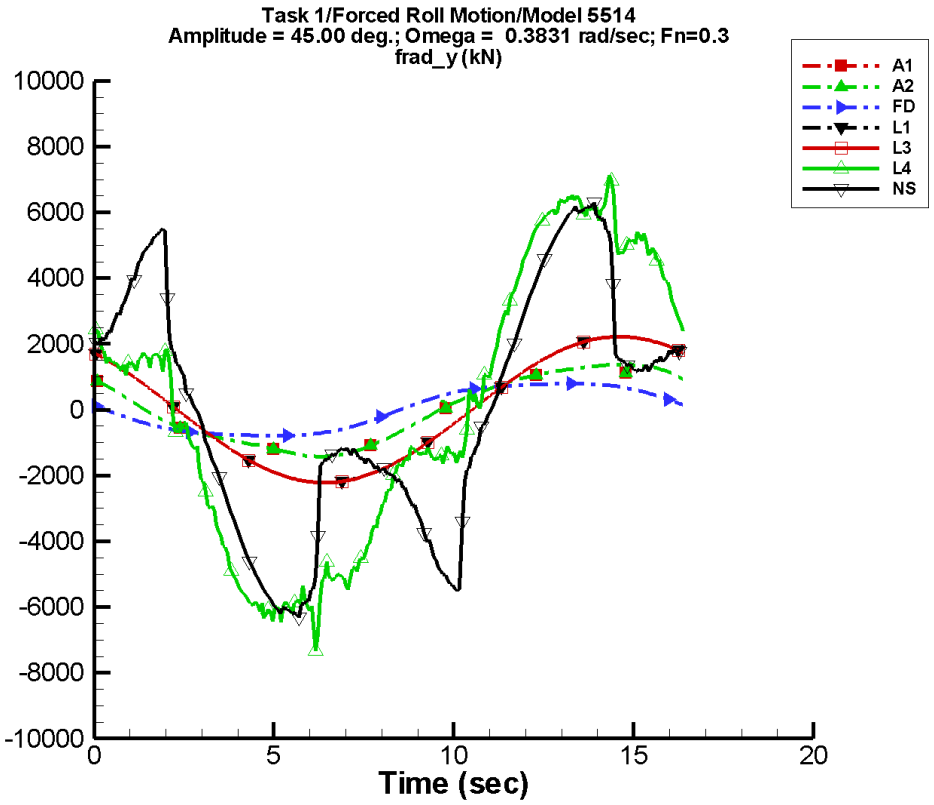
Figure D–443. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–885. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.392 | 1.03E+03 | 147 | 6.43 | -158 |
| A2 | 0.392 | 1.03E+03 | 147 | 6.43 | -158 |
| FD | -0.584 | 656. | 173 | 4.81 | -112 |
| L1 | -2.95E-02 | 1.48E+03 | 129 | 3.81E-03 | -52 |
| L3 | -4.69E-02 | 1.48E+03 | 129 | 2.24E-03 | -67 |
| L4 | 3.13 | 4.03E+03 | 149 | 54.9 | -6 |
| NF | — | — | — | — | — |
| NS | -1.64 | 2.21E+03 | 127 | 0.985 | 110 |

Table D–886. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.04E+03 | 1.00E+03 | -1.04E+03 | 1.00E+03 |
| A2 | -1.04E+03 | 1.00E+03 | -1.04E+03 | 1.00E+03 |
| FD | -634. | 634. | -633. | 632. |
| L1 | -1.48E+03 | 1.48E+03 | -1.48E+03 | 1.48E+03 |
| L3 | -1.48E+03 | 1.48E+03 | -1.48E+03 | 1.48E+03 |
| L4 | -4.84E+03 | 4.73E+03 | -4.73E+03 | 4.66E+03 |
| NF | — | — | — | — |
| NS | -2.70E+03 | 2.69E+03 | -2.66E+03 | 2.65E+03 |




Data identically zero, insufficient, or not available from NFA.

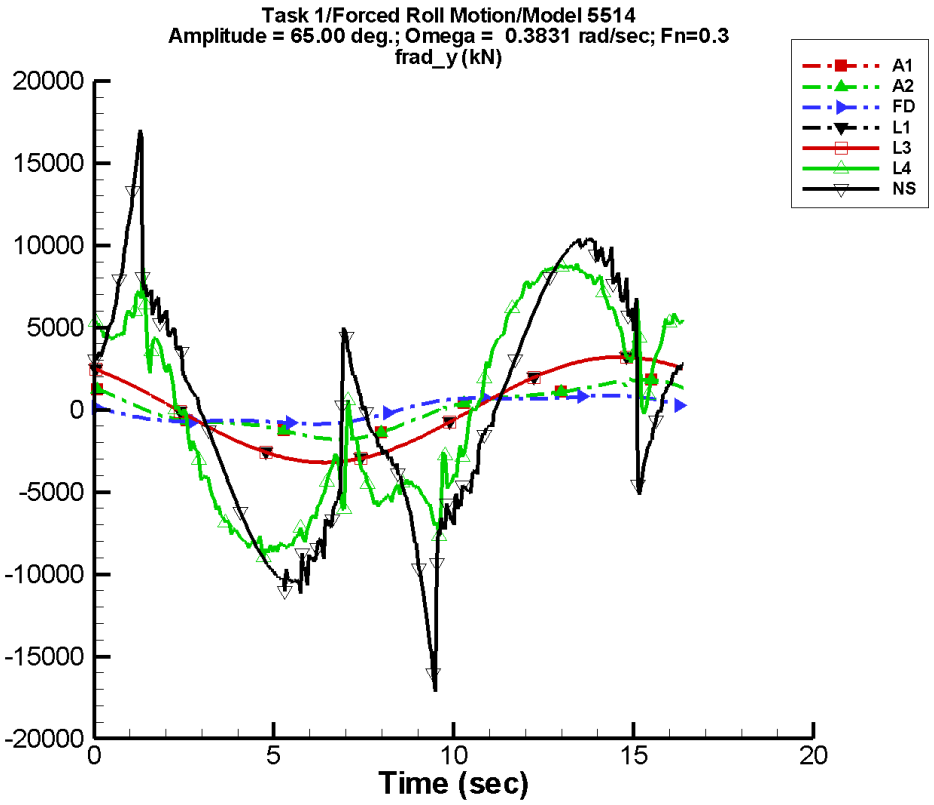
Figure D–444. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–887. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.59 | 1.38E+03 | 145 | 17.2 | -162 |
| A2 | -1.59 | 1.38E+03 | 145 | 17.2 | -162 |
| FD | -1.90 | 852. | 172 | 15.7 | -112 |
| L1 | -3.15E-02 | 2.22E+03 | 129 | 3.50E-03 | -65 |
| L3 | -4.92E-02 | 2.22E+03 | 129 | 4.23E-03 | -111 |
| L4 | 32.7 | 5.74E+03 | 141 | 127. | -48 |
| NF | — | — | — | — | — |
| NS | -5.72 | 4.25E+03 | 125 | 3.72 | 113 |

Table D–888. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.42E+03 | 1.43E+03 | -1.42E+03 | 1.35E+03 |
| A2 | -1.42E+03 | 1.43E+03 | -1.42E+03 | 1.35E+03 |
| FD | -789. | 789. | -788. | 788. |
| L1 | -2.22E+03 | 2.22E+03 | -2.22E+03 | 2.22E+03 |
| L3 | -2.22E+03 | 2.22E+03 | -2.22E+03 | 2.22E+03 |
| L4 | -7.32E+03 | 7.13E+03 | -6.19E+03 | 6.40E+03 |
| NF | — | — | — | — |
| NS | -6.32E+03 | 6.30E+03 | -6.14E+03 | 6.13E+03 |




Data identically zero, insufficient, or not available from NFA.

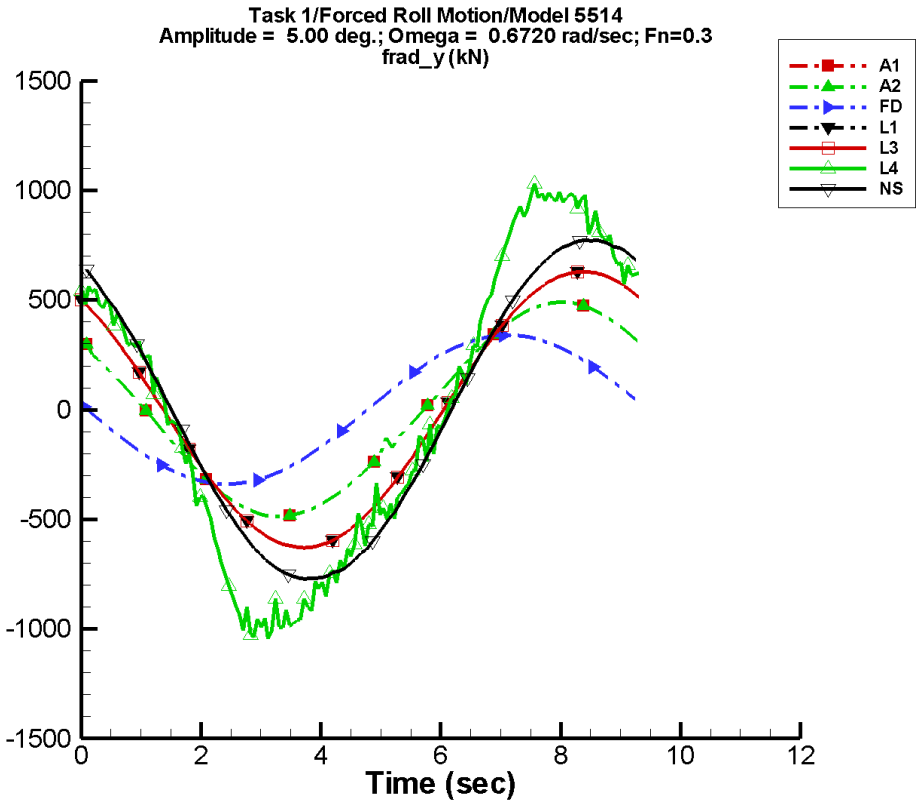
Figure D–445. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–889. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -7.95 | 1.57E+03 | 139 | 44.0 | -165 |
| A2 | -7.95 | 1.57E+03 | 139 | 44.0 | -165 |
| FD | -5.28 | 884. | 170 | 44.1 | -112 |
| L1 | -3.28E-02 | 3.21E+03 | 129 | 6.30E-03 | -65 |
| L3 | -5.33E-02 | 3.21E+03 | 129 | 7.80E-03 | -100 |
| L4 | 233. | 7.48E+03 | 133 | 369. | 10 |
| NF | — | — | — | — | — |
| NS | -14.0 | 7.36E+03 | 119 | 50.2 | 80 |

Table D–890. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.82E+03 | 1.84E+03 | -1.80E+03 | 1.78E+03 |
| A2 | -1.82E+03 | 1.84E+03 | -1.80E+03 | 1.78E+03 |
| FD | -867. | 867. | -868. | 860. |
| L1 | -3.21E+03 | 3.21E+03 | -3.20E+03 | 3.20E+03 |
| L3 | -3.21E+03 | 3.21E+03 | -3.20E+03 | 3.20E+03 |
| L4 | -8.97E+03 | 8.89E+03 | -8.47E+03 | 8.69E+03 |
| NF | — | — | — | — |
| NS | -1.72E+04 | 1.71E+04 | -1.42E+04 | 1.44E+04 |




Data identically zero, insufficient, or not available from NFA.

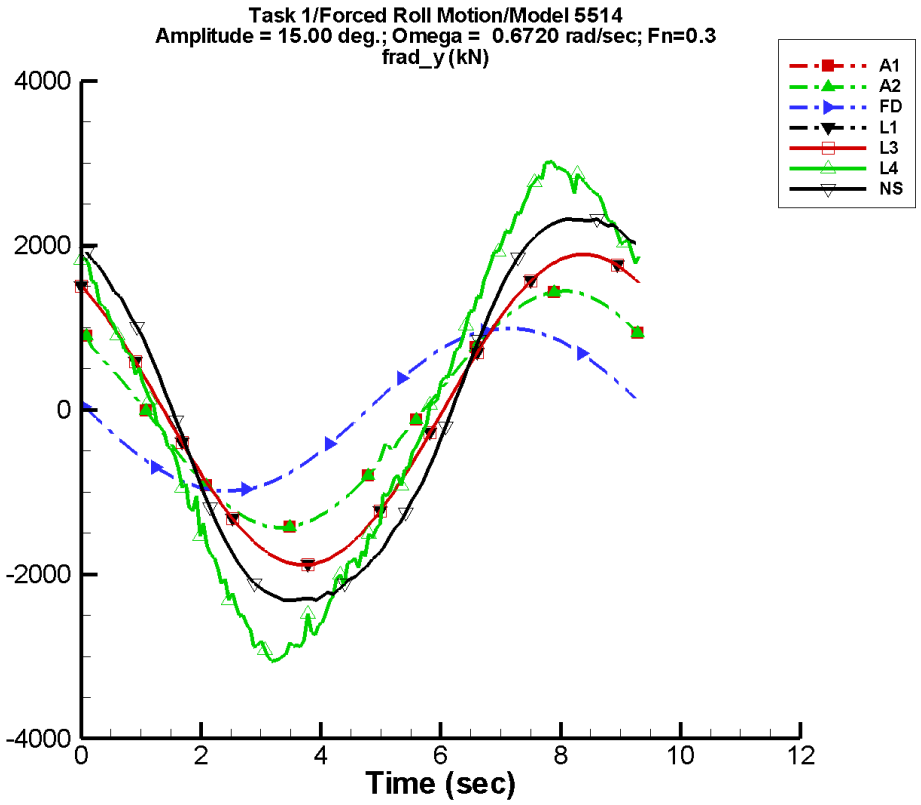
Figure D–446. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–891. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.725 | 480. | 141 | 2.17 | 97 |
| A2 | 0.725 | 480. | 141 | 2.17 | 97 |
| FD | -2.35E-02 | 340. | 176 | 4.62E-02 | -37 |
| L1 | -2.70E-02 | 629. | 127 | 3.45E-03 | -19 |
| L3 | -4.46E-02 | 629. | 127 | 1.58E-03 | -93 |
| L4 | 4.11 | 924. | 132 | 19.7 | -9 |
| NF | — | — | — | — | — |
| NS | 0.295 | 778. | 122 | 0.322 | -23 |

Table D–892. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -487. | 490. | -481. | 484. |
| A2 | -487. | 490. | -481. | 484. |
| FD | -340. | 340. | -336. | 340. |
| L1 | -629. | 629. | -627. | 627. |
| L3 | -629. | 629. | -627. | 627. |
| L4 | -1.04E+03 | 1.03E+03 | -986. | 975. |
| NF | — | — | — | — |
| NS | -771. | 772. | -765. | 766. |




Data identically zero, insufficient, or not available from NFA.

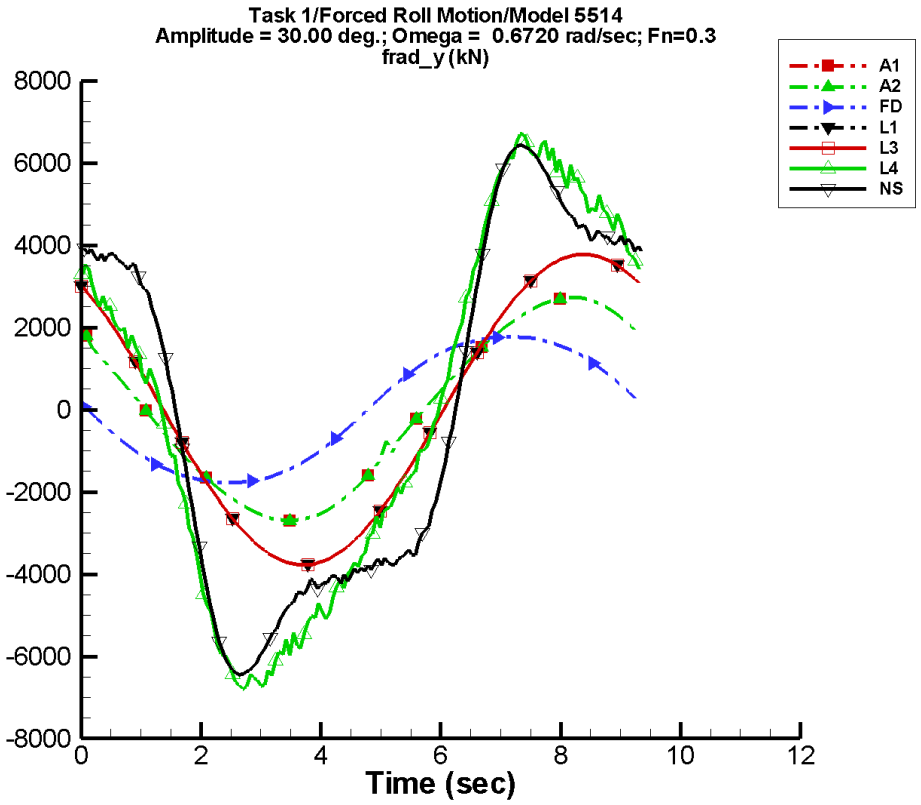
Figure D–447. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–893. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.66 | 1.42E+03 | 140 | 6.90 | 107 |
| A2 | 1.66 | 1.42E+03 | 140 | 6.90 | 107 |
| FD | -0.642 | 997. | 176 | 1.23 | -38 |
| L1 | -2.92E-02 | 1.89E+03 | 127 | 4.89E-03 | -56 |
| L3 | -4.59E-02 | 1.89E+03 | 127 | 4.85E-03 | -124 |
| L4 | 14.2 | 2.77E+03 | 137 | 44.7 | 1 |
| NF | — | — | — | — | — |
| NS | 0.484 | 2.43E+03 | 124 | 0.843 | -5 |

Table D–894. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.43E+03 | 1.44E+03 | -1.42E+03 | 1.42E+03 |
| A2 | -1.43E+03 | 1.44E+03 | -1.42E+03 | 1.42E+03 |
| FD | -989. | 989. | -978. | 990. |
| L1 | -1.89E+03 | 1.89E+03 | -1.88E+03 | 1.88E+03 |
| L3 | -1.89E+03 | 1.89E+03 | -1.88E+03 | 1.88E+03 |
| L4 | -3.06E+03 | 3.01E+03 | -2.99E+03 | 2.94E+03 |
| NF | — | — | — | — |
| NS | -2.32E+03 | 2.32E+03 | -2.31E+03 | 2.31E+03 |




Data identically zero, insufficient, or not available from NFA.

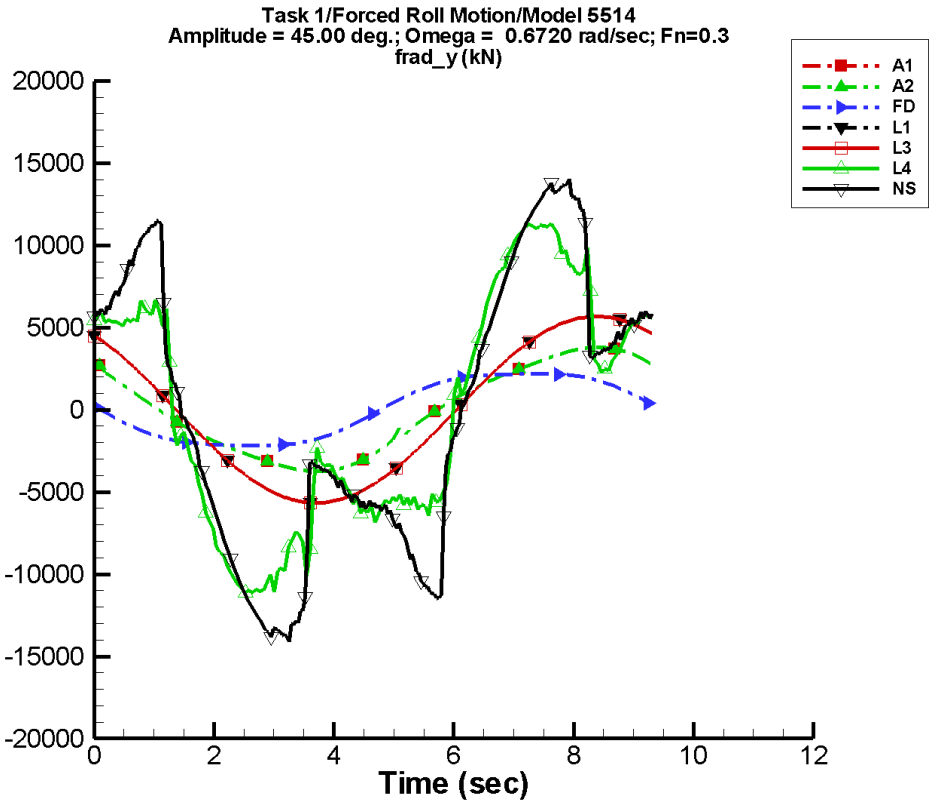
Figure D–448. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–895. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.18E-02 | 2.67E+03 | 139 | 18.7 | 131 |
| A2 | -8.18E-02 | 2.67E+03 | 139 | 18.7 | 131 |
| FD | -5.03 | 1.84E+03 | 176 | 9.67 | -38 |
| L1 | -3.57E-02 | 3.78E+03 | 127 | 1.31E-02 | -83 |
| L3 | -5.03E-02 | 3.78E+03 | 127 | 1.54E-02 | -123 |
| L4 | 44.7 | 6.11E+03 | 139 | 203. | -6 |
| NF | — | — | — | — | — |
| NS | -2.40 | 5.78E+03 | 129 | 3.38 | 52 |

Table D–896. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -2.70E+03 | 2.73E+03 | -2.66E+03 | 2.69E+03 |
| A2 | -2.70E+03 | 2.73E+03 | -2.66E+03 | 2.69E+03 |
| FD | -1.77E+03 | 1.77E+03 | -1.76E+03 | 1.78E+03 |
| L1 | -3.78E+03 | 3.78E+03 | -3.76E+03 | 3.76E+03 |
| L3 | -3.78E+03 | 3.78E+03 | -3.76E+03 | 3.76E+03 |
| L4 | -6.81E+03 | 6.71E+03 | -6.64E+03 | 6.43E+03 |
| NF | — | — | — | — |
| NS | -6.45E+03 | 6.44E+03 | -6.36E+03 | 6.34E+03 |




Data identically zero, insufficient, or not available from NFA.

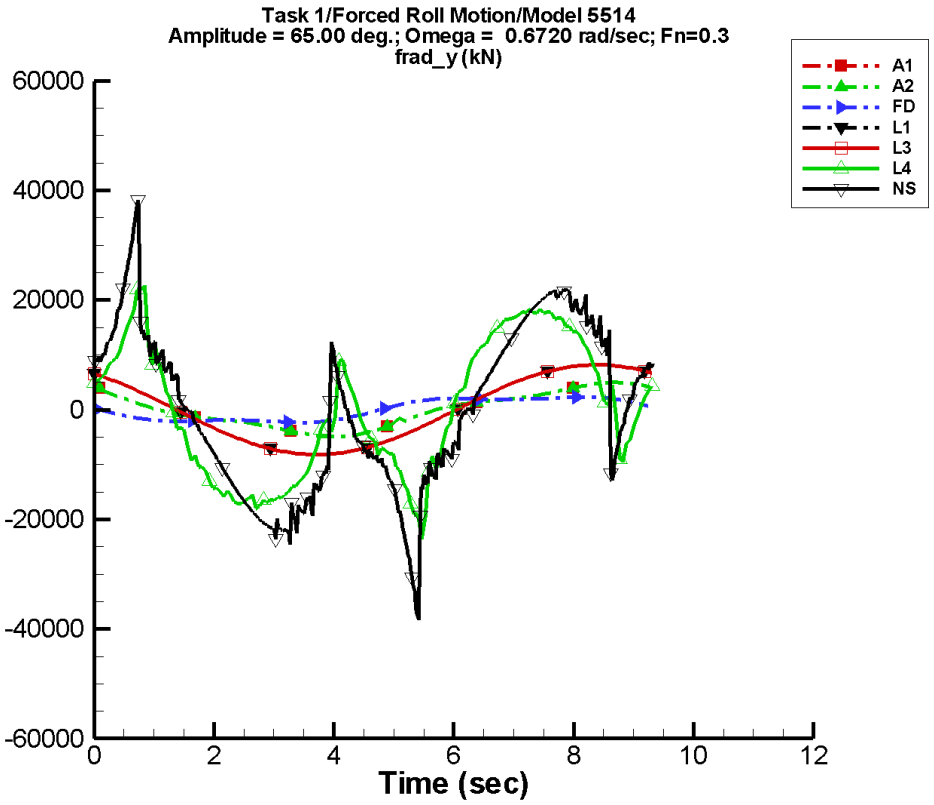
Figure D–449. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–897. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.19 | 3.64E+03 | 136 | 44.6 | 149 |
| A2 | -8.19 | 3.64E+03 | 136 | 44.6 | 149 |
| FD | -16.4 | 2.38E+03 | 176 | 31.5 | -38 |
| L1 | -4.66E-02 | 5.67E+03 | 127 | 2.46E-02 | -80 |
| L3 | -5.76E-02 | 5.67E+03 | 127 | 2.35E-02 | -112 |
| L4 | 215. | 9.04E+03 | 134 | 507. | 1 |
| NF | — | — | — | — | — |
| NS | -10.7 | 1.03E+04 | 127 | 9.15 | 49 |

Table D–898. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -3.74E+03 | 3.79E+03 | -3.68E+03 | 3.73E+03 |
| A2 | -3.74E+03 | 3.79E+03 | -3.68E+03 | 3.73E+03 |
| FD | -2.19E+03 | 2.19E+03 | -2.18E+03 | 2.19E+03 |
| L1 | -5.66E+03 | 5.66E+03 | -5.64E+03 | 5.64E+03 |
| L3 | -5.66E+03 | 5.66E+03 | -5.64E+03 | 5.64E+03 |
| L4 | -1.11E+04 | 1.13E+04 | -1.10E+04 | 1.12E+04 |
| NF | — | — | — | — |
| NS | -1.41E+04 | 1.40E+04 | -1.36E+04 | 1.35E+04 |




Data identically zero, insufficient, or not available from NFA.

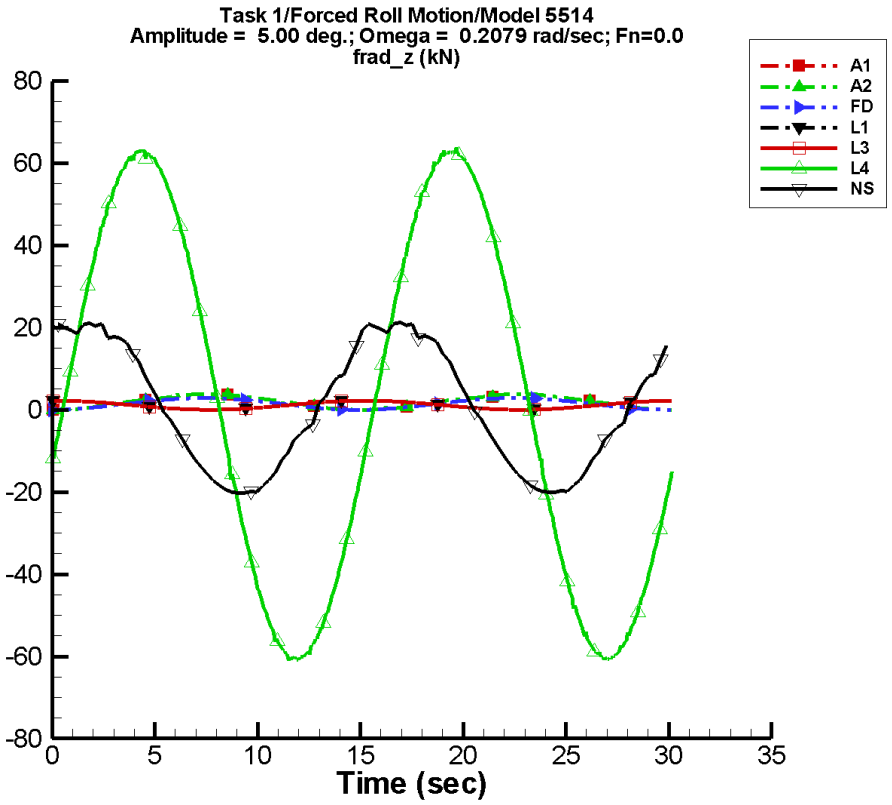
Figure D–450. Time history of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–899. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -32.4 | 4.30E+03 | 130 | 112. | 160 |
| A2 | -32.4 | 4.30E+03 | 130 | 112. | 160 |
| FD | -45.9 | 2.44E+03 | 176 | 88.6 | -39 |
| L1 | -6.40E-02 | 8.18E+03 | 127 | 4.19E-02 | -92 |
| L3 | -7.03E-02 | 8.18E+03 | 127 | 4.47E-02 | -124 |
| L4 | 686. | 1.27E+04 | 136 | 1.26E+03 | 16 |
| NF | — | — | — | — | — |
| NS | -51.3 | 1.62E+04 | 121 | 90.1 | 65 |

Table D–900. Minimum and maximum of of $F_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.93E+03 | 5.00E+03 | -4.81E+03 | 4.87E+03 |
| A2 | -4.93E+03 | 5.00E+03 | -4.81E+03 | 4.87E+03 |
| FD | -2.32E+03 | 2.33E+03 | -2.27E+03 | 2.27E+03 |
| L1 | -8.18E+03 | 8.18E+03 | -8.15E+03 | 8.15E+03 |
| L3 | -8.18E+03 | 8.18E+03 | -8.15E+03 | 8.15E+03 |
| L4 | -2.36E+04 | 2.27E+04 | -1.70E+04 | 1.78E+04 |
| NF | — | — | — | — |
| NS | -3.84E+04 | 3.82E+04 | -3.18E+04 | 3.22E+04 |




Data identically zero, insufficient, or not available from NFA.

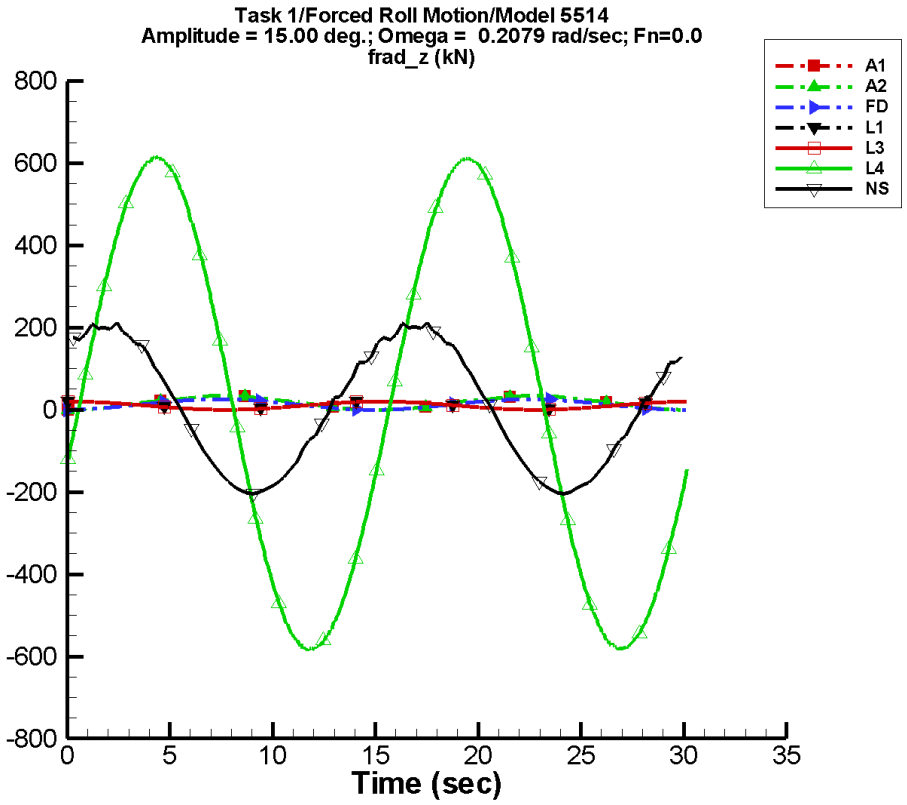
Figure D–451. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–901. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.87 | 9.21E-03 | 169 | 1.87 | -90 |
| A2 | 1.87 | 9.21E-03 | 169 | 1.87 | -90 |
| FD | 1.42 | 8.64E-06 | 21 | 1.43 | -86 |
| L1 | 1.10 | 6.23E-04 | -9 | 1.10 | 87 |
| L3 | 1.10 | 6.22E-04 | -9 | 1.10 | 87 |
| L4 | 0.955 | 7.94E-02 | -136 | 61.6 | -14 |
| NF | — | — | — | — | — |
| NS | 0.567 | 6.44E-02 | -13 | 20.8 | 51 |

Table D–902. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.117 | 4.63 | -9.30E-03 | 3.86 |
| A2 | -0.117 | 4.63 | -9.30E-03 | 3.86 |
| FD | -3.45E-03 | 2.85 | 2.02E-03 | 2.84 |
| L1 | -6.52E-04 | 2.21 | 1.06E-03 | 2.20 |
| L3 | -6.88E-04 | 2.21 | 1.05E-03 | 2.20 |
| L4 | -61.0 | 63.9 | -60.5 | 62.7 |
| NF | — | — | — | — |
| NS | -20.6 | 21.2 | -19.9 | 20.3 |




Data identically zero, insufficient, or not available from NFA.

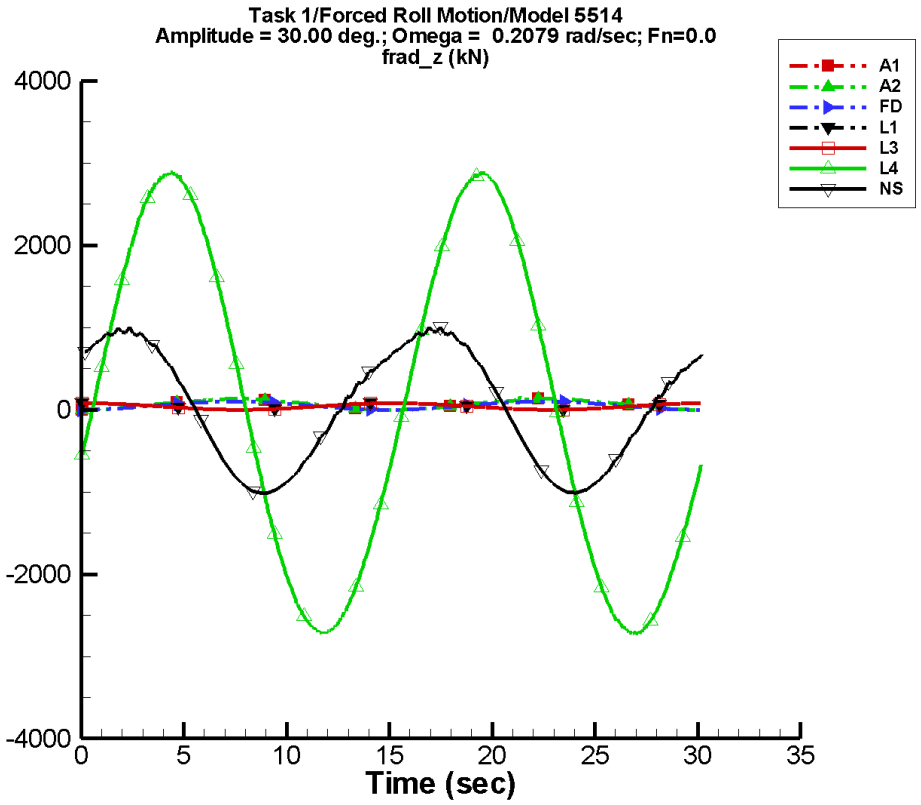
Figure D–452. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–903. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 16.7 | 4.56E-02 | 171 | 16.6 | -90 |
| A2 | 16.7 | 4.56E-02 | 171 | 16.6 | -90 |
| FD | 12.7 | 7.21E-04 | 21 | 12.7 | -86 |
| L1 | 9.92 | 2.02E-03 | -21 | 9.92 | 87 |
| L3 | 9.92 | 2.01E-03 | -21 | 9.92 | 87 |
| L4 | 6.99 | 1.01 | -108 | 596. | -13 |
| NF | — | — | — | — | — |
| NS | 5.32 | 0.625 | -13 | 203. | 51 |

Table D–904. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.01 | 41.2 | -9.14E-02 | 34.4 |
| A2 | -1.01 | 41.2 | -9.14E-02 | 34.4 |
| FD | -3.10E-02 | 25.4 | 1.89E-02 | 25.3 |
| L1 | -3.04E-03 | 19.8 | 1.26E-02 | 19.8 |
| L3 | -3.07E-03 | 19.8 | 1.26E-02 | 19.8 |
| L4 | -586. | 615. | -582. | 612. |
| NF | — | — | — | — |
| NS | -208. | 213. | -198. | 198. |




Data identically zero, insufficient, or not available from NFA.

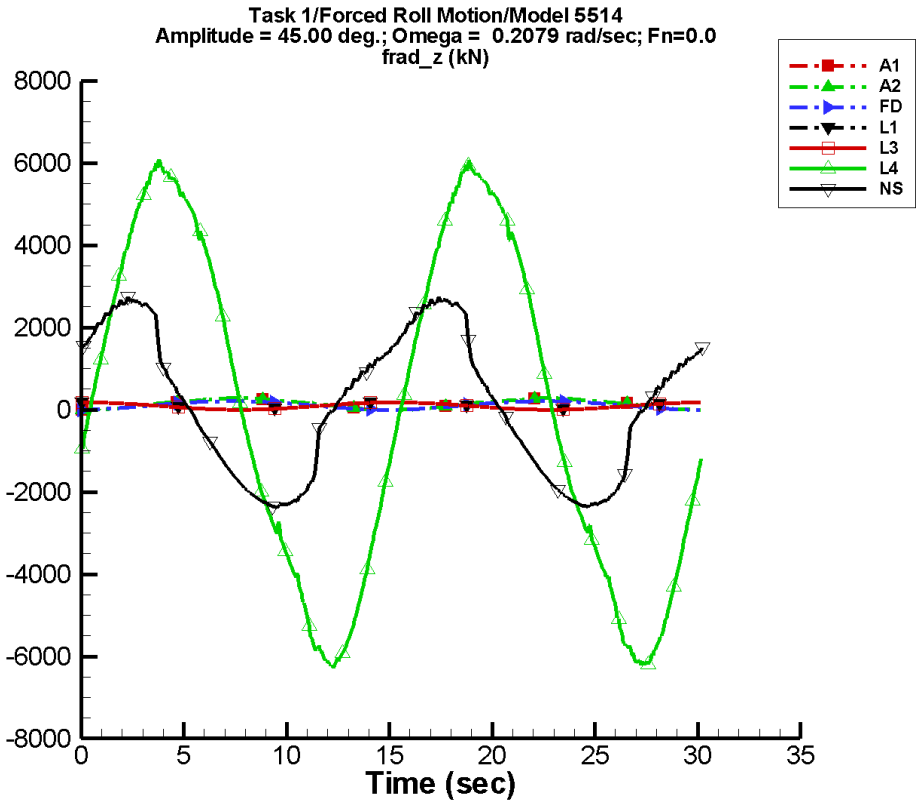
Figure D–453. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–905. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 65.2 | 0.134 | 170 | 64.3 | -90 |
| A2 | 65.2 | 0.134 | 170 | 64.3 | -90 |
| FD | 49.5 | 1.14E-02 | 21 | 49.1 | -86 |
| L1 | 39.7 | 4.83E-03 | -35 | 39.7 | 87 |
| L3 | 39.7 | 4.84E-03 | -35 | 39.7 | 87 |
| L4 | 16.7 | 9.29 | -76 | 2.78E+03 | -12 |
| NF | — | — | — | — | — |
| NS | 26.1 | 2.94 | -14 | 968. | 52 |

Table D–906. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.09 | 160. | -0.362 | 133. |
| A2 | -4.09 | 160. | -0.362 | 133. |
| FD | -0.124 | 98.0 | 8.47E-02 | 97.8 |
| L1 | -9.08E-03 | 79.4 | 5.37E-02 | 79.3 |
| L3 | -8.83E-03 | 79.4 | 5.37E-02 | 79.3 |
| L4 | -2.72E+03 | 2.90E+03 | -2.71E+03 | 2.87E+03 |
| NF | — | — | — | — |
| NS | -1.03E+03 | 1.01E+03 | -1.01E+03 | 955. |




Data identically zero, insufficient, or not available from NFA.

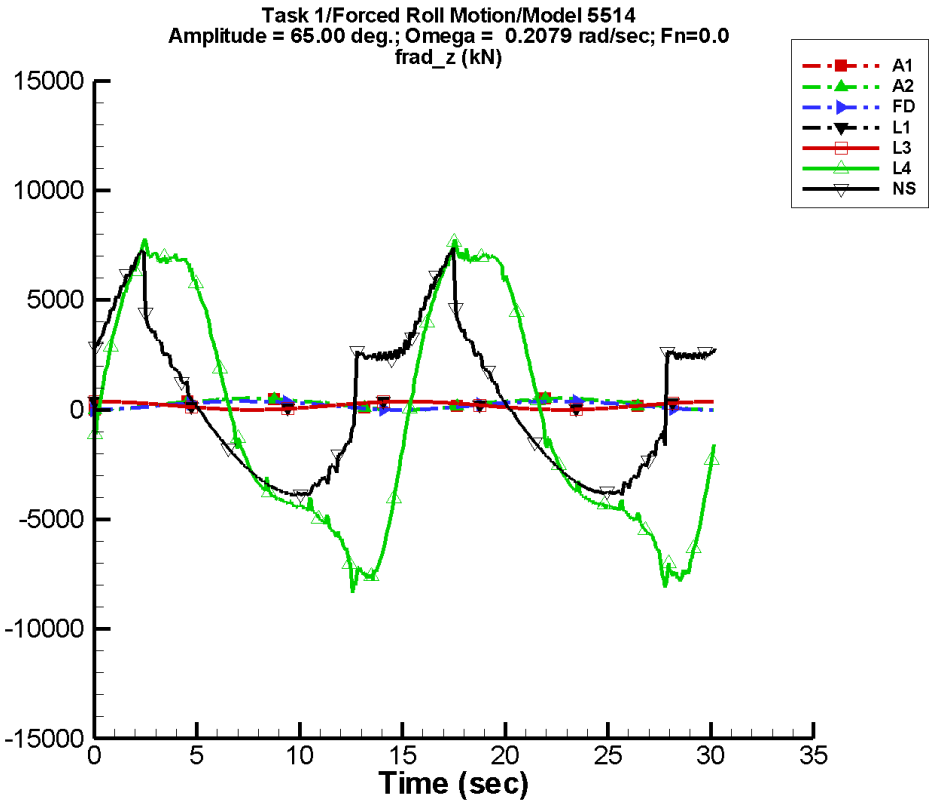
Figure D–454. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–907. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 140. | 0.232 | 167 | 136. | -90 |
| A2 | 140. | 0.232 | 167 | 136. | -90 |
| FD | 107. | 5.61E-02 | 21 | 104. | -86 |
| L1 | 89.3 | 8.72E-03 | -45 | 89.3 | 87 |
| L3 | 89.3 | 8.80E-03 | -44 | 89.3 | 87 |
| L4 | -60.6 | 18.4 | 74 | 5.71E+03 | -11 |
| NF | — | — | — | — | — |
| NS | 95.6 | 7.17 | -13 | 2.36E+03 | 52 |

Table D–908. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -9.22 | 340. | -0.775 | 282. |
| A2 | -9.22 | 340. | -0.775 | 282. |
| FD | -0.279 | 208. | 0.224 | 208. |
| L1 | -1.75E-02 | 179. | 0.123 | 178. |
| L3 | -1.75E-02 | 179. | 0.123 | 178. |
| L4 | -6.28E+03 | 6.09E+03 | -6.19E+03 | 5.93E+03 |
| NF | — | — | — | — |
| NS | -2.42E+03 | 2.76E+03 | -2.37E+03 | 2.65E+03 |




Data identically zero, insufficient, or not available from NFA.

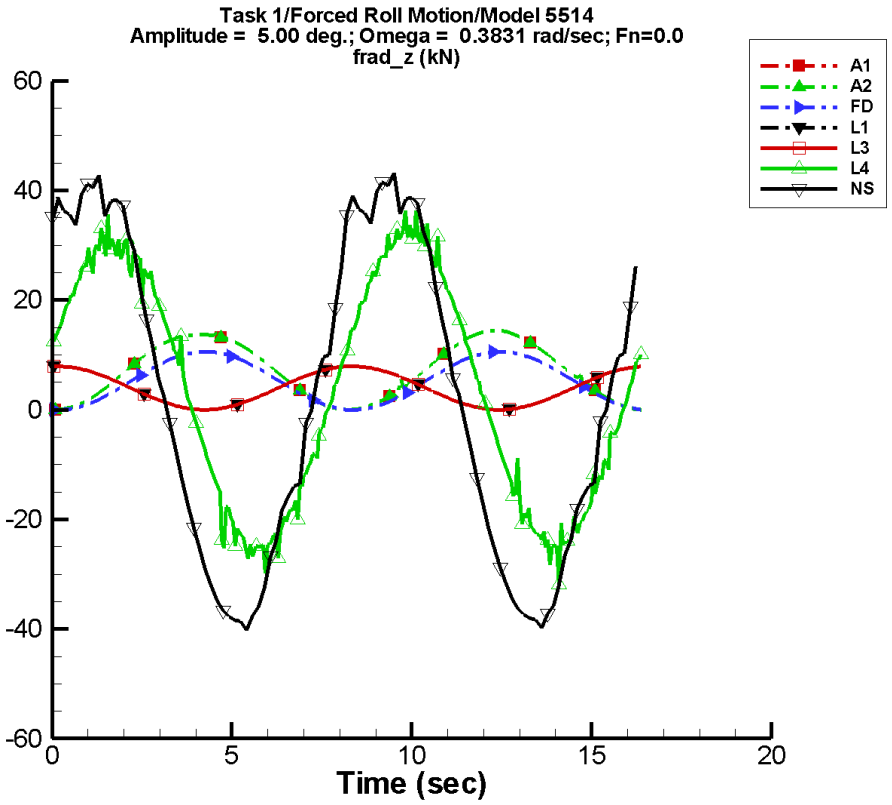
Figure D–455. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–909. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 268. | 0.305 | 156 | 252. | -90 |
| A2 | 268. | 0.305 | 156 | 252. | -90 |
| FD | 204. | 0.231 | 21 | 193. | -85 |
| L1 | 186. | 1.59E-02 | -53 | 186. | 87 |
| L3 | 186. | 1.59E-02 | -53 | 186. | 87 |
| L4 | -405. | 73.7 | 46 | 6.81E+03 | 3 |
| NF | — | — | — | — | — |
| NS | 300. | 9.22 | 21 | 4.43E+03 | 54 |

Table D–910. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -19.2 | 637. | -1.45 | 522. |
| A2 | -19.2 | 637. | -1.45 | 522. |
| FD | -0.583 | 385. | 0.473 | 385. |
| L1 | -3.32E-02 | 373. | 0.261 | 372. |
| L3 | -3.32E-02 | 373. | 0.261 | 372. |
| L4 | -8.33E+03 | 7.80E+03 | -7.66E+03 | 7.38E+03 |
| NF | — | — | — | — |
| NS | -4.01E+03 | 7.37E+03 | -3.88E+03 | 6.78E+03 |




Data identically zero, insufficient, or not available from NFA.

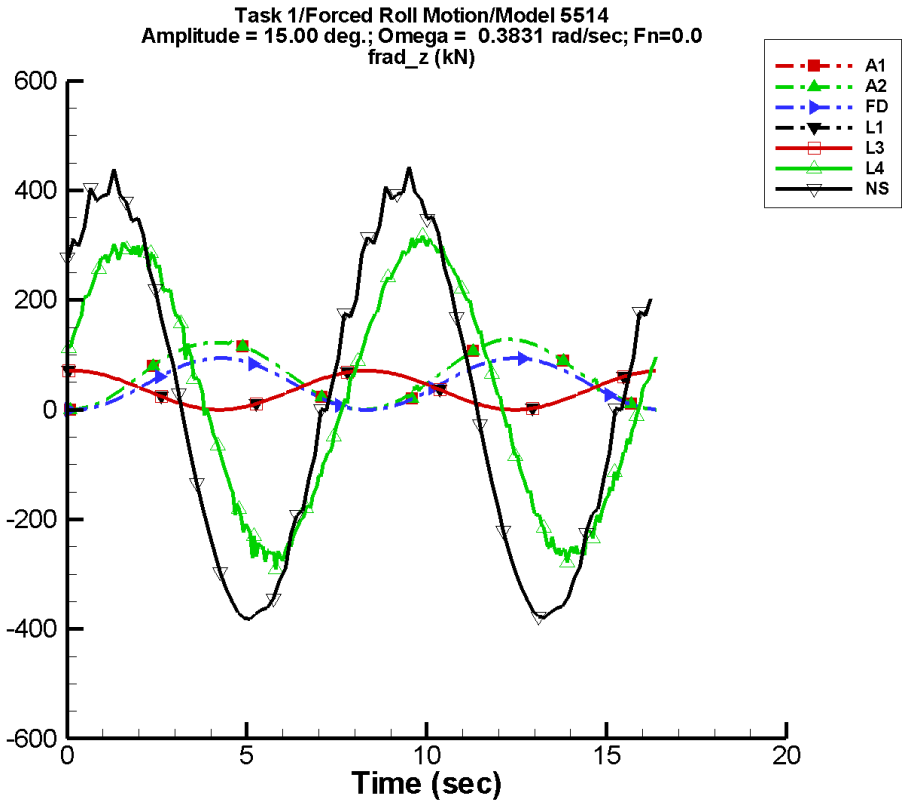
Figure D–456. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–911. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.05 | 2.80E-02 | 147 | 7.03 | -92 |
| A2 | 7.05 | 2.80E-02 | 147 | 7.03 | -92 |
| FD | 5.26 | 8.10E-05 | -65 | 5.30 | -97 |
| L1 | 3.96 | 5.44E-03 | -31 | 3.96 | 84 |
| L3 | 3.96 | 5.43E-03 | -31 | 3.96 | 84 |
| L4 | 3.32 | 0.637 | -155 | 28.3 | 16 |
| NF | — | — | — | — | — |
| NS | 2.02 | 8.79E-02 | -143 | 40.3 | 42 |

Table D–912. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -4.22E-03 | 14.8 | -1.24E-02 | 14.3 |
| A2 | -4.22E-03 | 14.8 | -1.24E-02 | 14.3 |
| FD | -3.90E-02 | 10.6 | -3.63E-02 | 10.5 |
| L1 | -6.16E-03 | 7.92 | 1.51E-02 | 7.92 |
| L3 | -6.14E-03 | 7.92 | 1.52E-02 | 7.92 |
| L4 | -31.9 | 36.4 | -25.7 | 32.9 |
| NF | — | — | — | — |
| NS | -40.2 | 43.5 | -37.4 | 40.0 |




Data identically zero, insufficient, or not available from NFA.

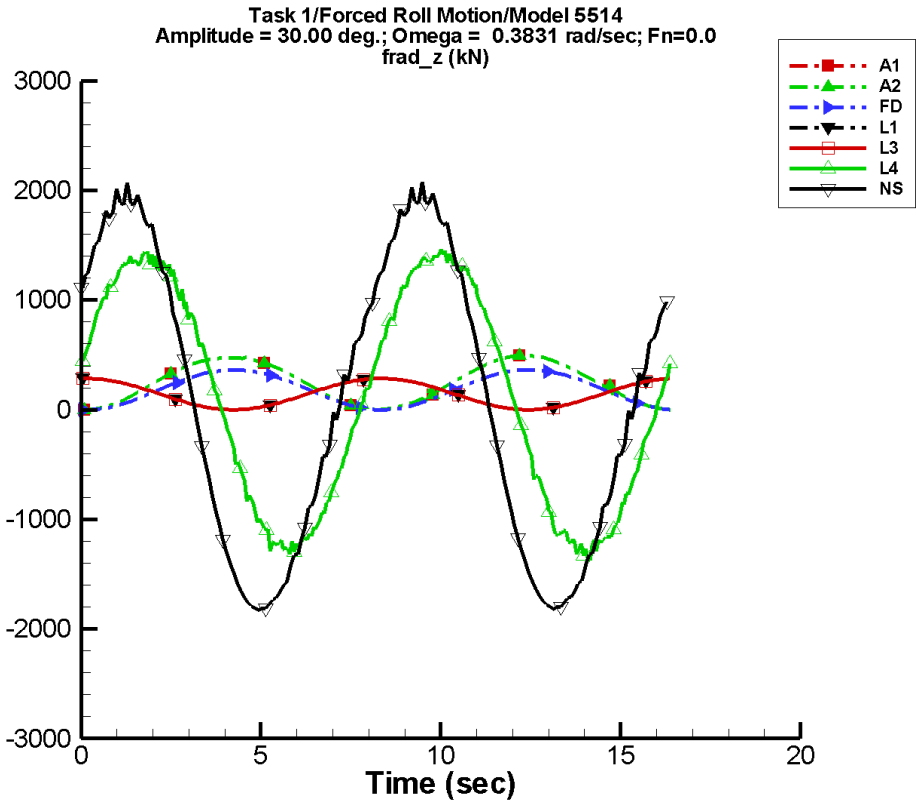
Figure D–457. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–913. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 62.9 | 0.219 | 151 | 62.6 | -92 |
| A2 | 62.9 | 0.219 | 151 | 62.6 | -92 |
| FD | 47.0 | 6.48E-03 | -65 | 47.2 | -97 |
| L1 | 35.6 | 1.65E-02 | -28 | 35.6 | 84 |
| L3 | 35.6 | 1.65E-02 | -28 | 35.6 | 84 |
| L4 | 27.1 | 4.62 | -138 | 282. | 16 |
| NF | — | — | — | — | — |
| NS | 16.9 | 0.836 | -144 | 392. | 42 |

Table D–914. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -6.30E-02 | 132. | -0.137 | 127. |
| A2 | -6.30E-02 | 132. | -0.137 | 127. |
| FD | -0.351 | 94.1 | -0.326 | 93.4 |
| L1 | -2.62E-02 | 71.2 | 0.165 | 71.3 |
| L3 | -2.60E-02 | 71.2 | 0.165 | 71.3 |
| L4 | -292. | 317. | -267. | 307. |
| NF | — | — | — | — |
| NS | -382. | 445. | -366. | 397. |




Data identically zero, insufficient, or not available from NFA.

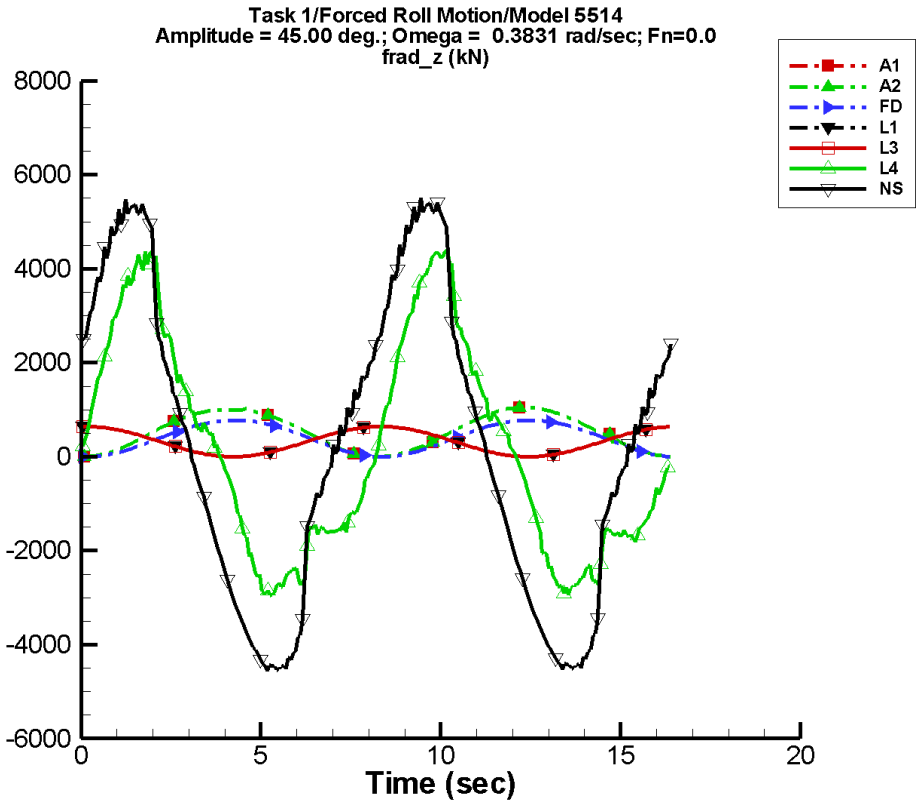
Figure D–458. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–915. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 245. | 0.799 | 149 | 242. | -92 |
| A2 | 245. | 0.799 | 149 | 242. | -92 |
| FD | 183. | 0.102 | -65 | 182. | -97 |
| L1 | 142. | 3.41E-02 | -23 | 143. | 84 |
| L3 | 142. | 3.41E-02 | -23 | 143. | 84 |
| L4 | 91.6 | 18.1 | -94 | 1.36E+03 | 14 |
| NF | — | — | — | — | — |
| NS | 67.0 | 3.71 | -141 | 1.85E+03 | 43 |

Table D–916. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.285 | 510. | -0.499 | 492. |
| A2 | -0.285 | 510. | -0.499 | 492. |
| FD | -1.40 | 364. | -1.29 | 361. |
| L1 | -7.40E-02 | 285. | 0.689 | 285. |
| L3 | -7.50E-02 | 285. | 0.689 | 285. |
| L4 | -1.37E+03 | 1.46E+03 | -1.29E+03 | 1.41E+03 |
| NF | — | — | — | — |
| NS | -1.83E+03 | 2.09E+03 | -1.79E+03 | 1.94E+03 |




Data identically zero, insufficient, or not available from NFA.

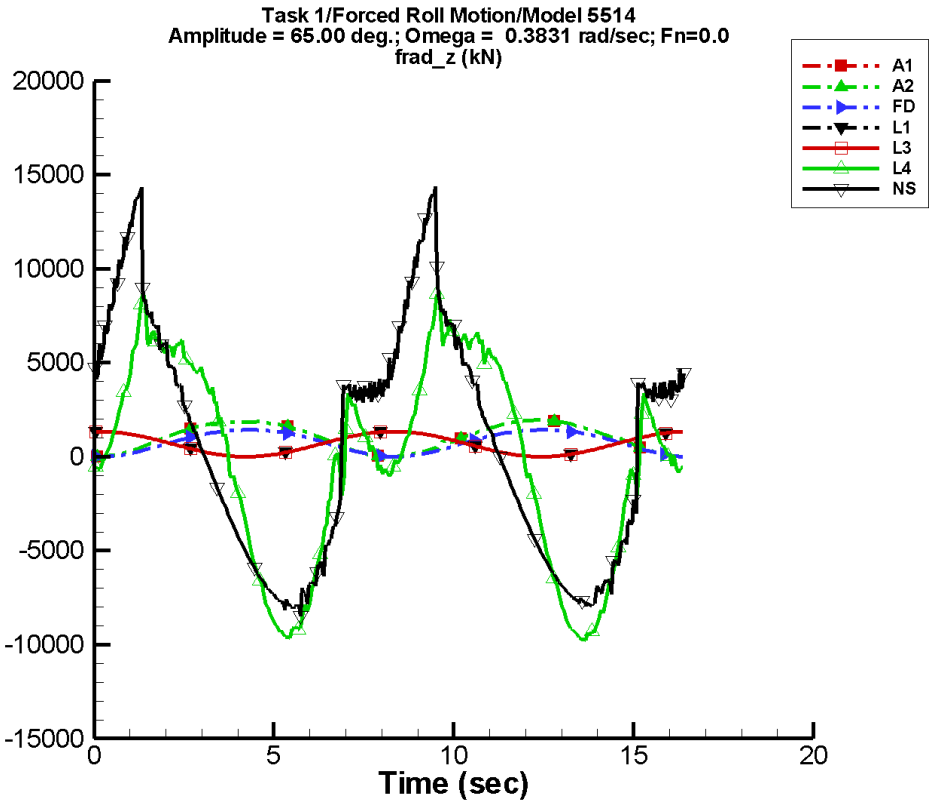
Figure D–459. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–917. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 528. | 1.61 | 144 | 513. | -92 |
| A2 | 528. | 1.61 | 144 | 513. | -92 |
| FD | 395. | 0.502 | -65 | 387. | -97 |
| L1 | 320. | 5.32E-02 | -18 | 321. | 84 |
| L3 | 320. | 5.33E-02 | -18 | 321. | 84 |
| L4 | 181. | 30.0 | 10 | 3.16E+03 | 13 |
| NF | — | — | — | — | — |
| NS | 208. | 8.87 | -137 | 4.47E+03 | 43 |

Table D–918. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.666 | 1.09E+03 | -0.845 | 1.04E+03 |
| A2 | -0.666 | 1.09E+03 | -0.845 | 1.04E+03 |
| FD | -3.16 | 772. | -2.87 | 767. |
| L1 | -0.147 | 641. | 1.57 | 642. |
| L3 | -0.148 | 641. | 1.57 | 642. |
| L4 | -2.95E+03 | 4.41E+03 | -2.88E+03 | 4.31E+03 |
| NF | — | — | — | — |
| NS | -4.56E+03 | 5.54E+03 | -4.48E+03 | 5.38E+03 |




Data identically zero, insufficient, or not available from NFA.

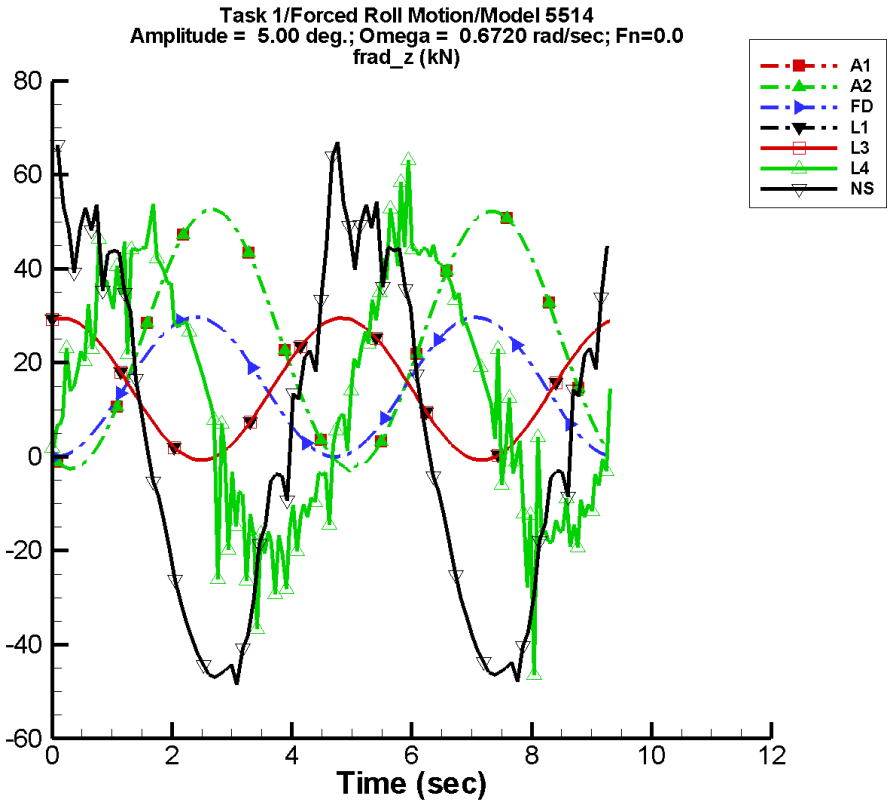
Figure D–460. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–919. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.01E+03 | 2.79 | 130 | 949. | -92 |
| A2 | 1.01E+03 | 2.79 | 130 | 949. | -92 |
| FD | 755. | 2.07 | -66 | 715. | -98 |
| L1 | 669. | 8.10E-02 | -12 | 669. | 84 |
| L3 | 669. | 8.14E-02 | -12 | 669. | 84 |
| L4 | -312. | 364. | -100 | 6.61E+03 | 20 |
| NF | — | — | — | — | — |
| NS | 646. | 19.1 | 156 | 8.48E+03 | 45 |

Table D–920. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.42 | 2.02E+03 | -0.627 | 1.93E+03 |
| A2 | -1.42 | 2.02E+03 | -0.627 | 1.93E+03 |
| FD | -6.59 | 1.43E+03 | -5.83 | 1.42E+03 |
| L1 | -0.280 | 1.34E+03 | 3.30 | 1.34E+03 |
| L3 | -0.279 | 1.34E+03 | 3.30 | 1.34E+03 |
| L4 | -9.77E+03 | 8.76E+03 | -9.59E+03 | 7.29E+03 |
| NF | — | — | — | — |
| NS | -8.49E+03 | 1.45E+04 | -7.97E+03 | 1.34E+04 |




Data identically zero, insufficient, or not available from NFA.

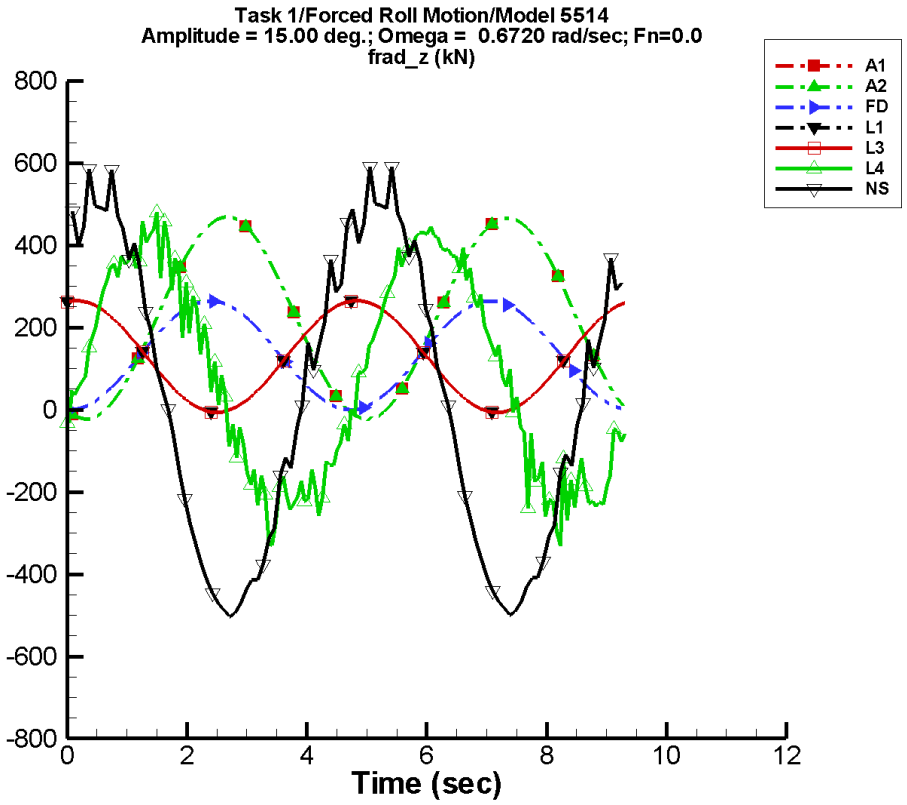
Figure D–461. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–921. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 24.9 | 8.08E-02 | 8 | 27.5 | -115 |
| A2 | 24.9 | 8.08E-02 | 8 | 27.5 | -115 |
| FD | 14.8 | 3.41E-04 | -44 | 14.9 | -94 |
| L1 | 14.4 | 7.13E-03 | -56 | 15.1 | 78 |
| L3 | 14.4 | 7.15E-03 | -55 | 15.1 | 78 |
| L4 | 12.6 | 2.52 | 169 | 32.3 | -18 |
| NF | — | — | — | — | — |
| NS | 4.67 | 0.339 | -168 | 50.4 | 57 |

Table D–922. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -3.47 | 52.6 | -2.09 | 51.3 |
| A2 | -3.47 | 52.6 | -2.09 | 51.3 |
| FD | -3.50E-02 | 29.7 | 0.130 | 29.4 |
| L1 | -0.734 | 29.5 | -0.478 | 29.5 |
| L3 | -0.735 | 29.5 | -0.478 | 29.5 |
| L4 | -46.4 | 63.0 | -21.4 | 48.9 |
| NF | — | — | — | — |
| NS | -48.5 | 68.0 | -45.9 | 59.2 |




Data identically zero, insufficient, or not available from NFA.

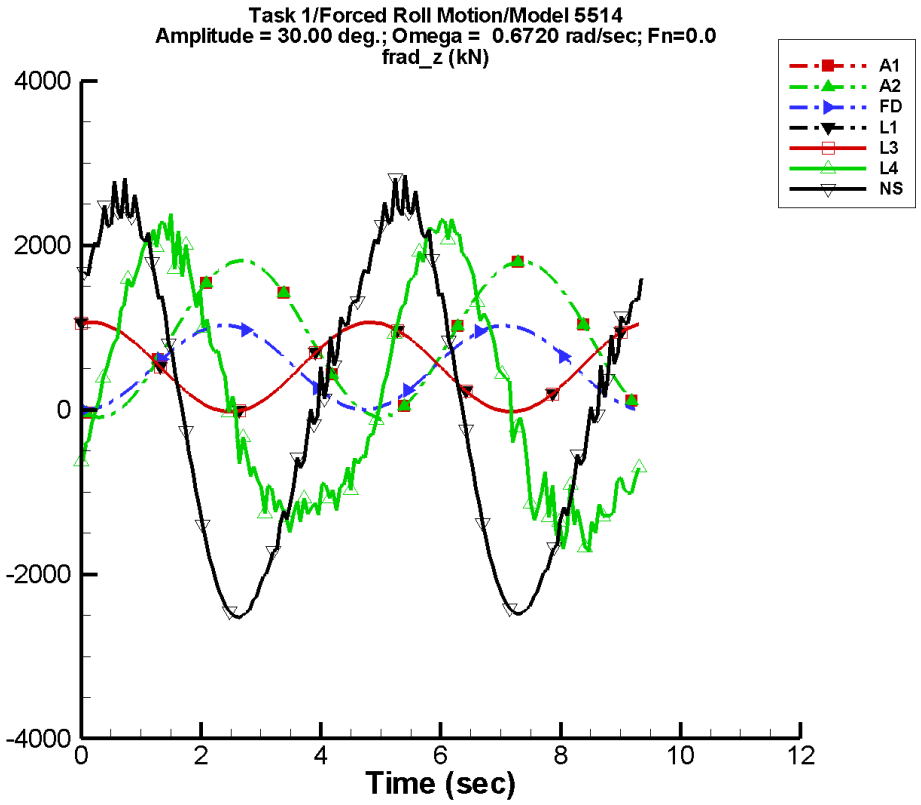
Figure D–462. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–923. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 222. | 0.635 | -2 | 245. | -115 |
| A2 | 222. | 0.635 | -2 | 245. | -115 |
| FD | 133. | 2.75E-02 | -34 | 132. | -94 |
| L1 | 129. | 2.08E-02 | -52 | 136. | 78 |
| L3 | 129. | 2.08E-02 | -52 | 136. | 78 |
| L4 | 81.9 | 18.0 | 167 | 337. | -16 |
| NF | — | — | — | — | — |
| NS | 32.4 | 3.18 | -168 | 502. | 55 |

Table D–924. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -30.9 | 469. | -18.8 | 457. |
| A2 | -30.9 | 469. | -18.8 | 457. |
| FD | -0.315 | 265. | 1.19 | 262. |
| L1 | -6.53 | 265. | -4.27 | 265. |
| L3 | -6.53 | 265. | -4.27 | 265. |
| L4 | -331. | 481. | -240. | 422. |
| NF | — | — | — | — |
| NS | -505. | 601. | -471. | 515. |




Data identically zero, insufficient, or not available from NFA.

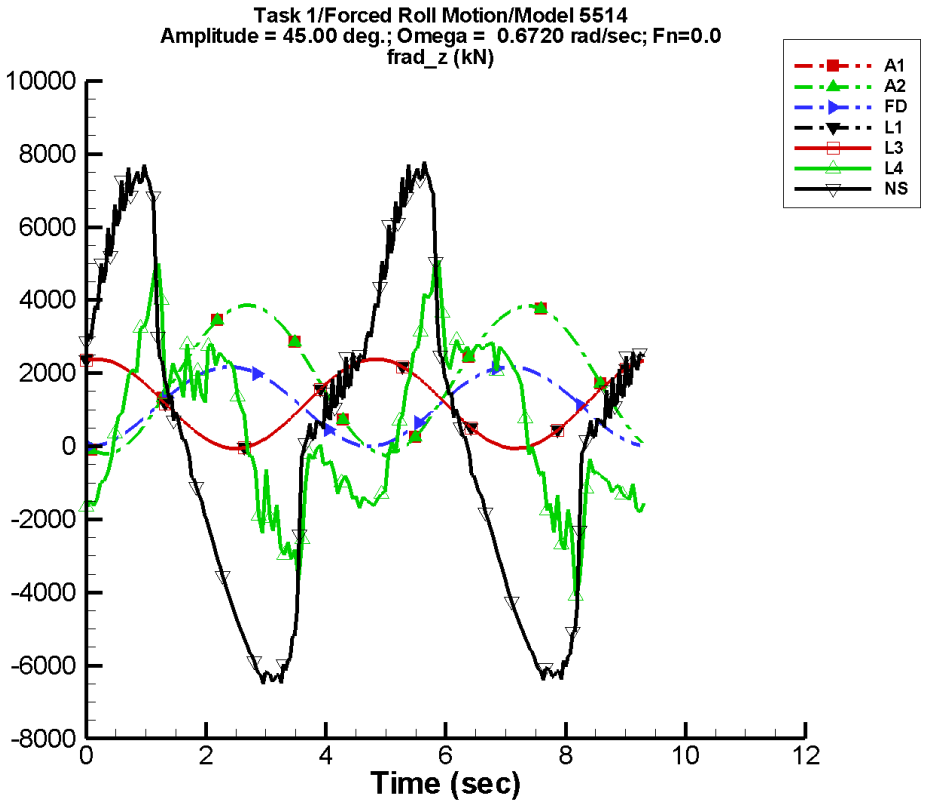
Figure D–463. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–925. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 866. | 2.96 | -6 | 951. | -115 |
| A2 | 866. | 2.96 | -6 | 951. | -115 |
| FD | 516. | 0.433 | -33 | 512. | -94 |
| L1 | 517. | 3.97E-02 | -48 | 544. | 78 |
| L3 | 517. | 3.93E-02 | -48 | 544. | 78 |
| L4 | 166. | 69.0 | -51 | 1.80E+03 | -16 |
| NF | — | — | — | — | — |
| NS | 92.0 | 15.1 | -170 | 2.39E+03 | 53 |

Table D–926. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -123. | 1.81E+03 | -75.0 | 1.77E+03 |
| A2 | -123. | 1.81E+03 | -75.0 | 1.77E+03 |
| FD | -1.26 | 1.02E+03 | 4.95 | 1.01E+03 |
| L1 | -26.0 | 1.06E+03 | -17.1 | 1.06E+03 |
| L3 | -26.0 | 1.06E+03 | -17.1 | 1.06E+03 |
| L4 | -1.72E+03 | 2.39E+03 | -1.44E+03 | 2.21E+03 |
| NF | — | — | — | — |
| NS | -2.52E+03 | 2.90E+03 | -2.47E+03 | 2.57E+03 |




Data identically zero, insufficient, or not available from NFA.

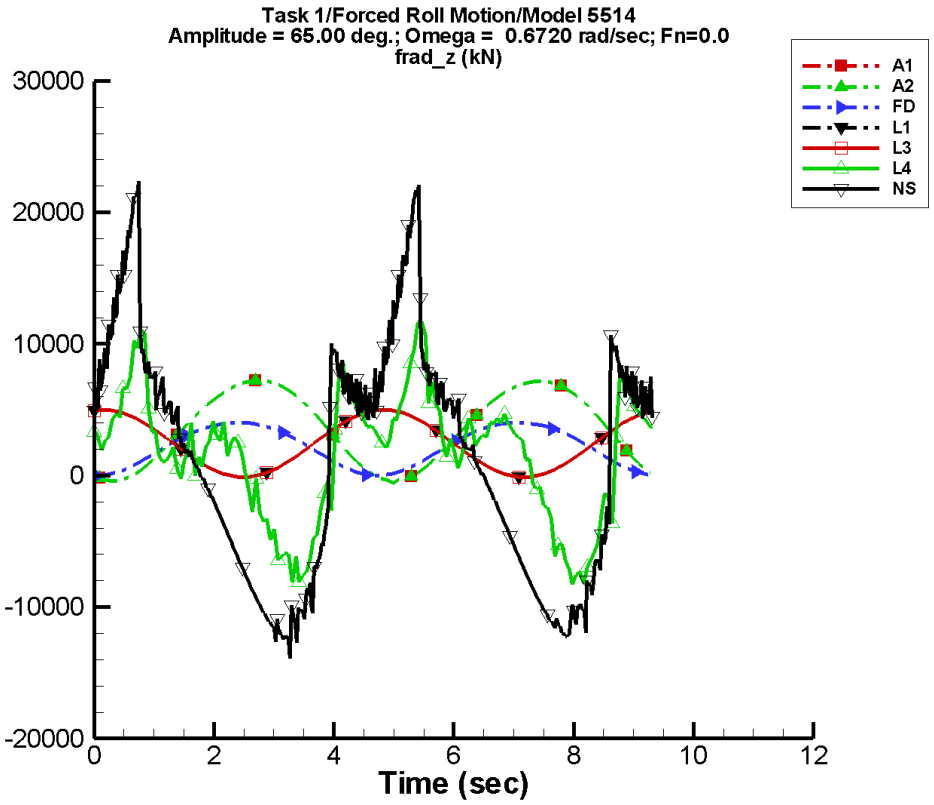
Figure D–464. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–927. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.87E+03 | 8.54 | -9 | 2.03E+03 | -116 |
| A2 | 1.87E+03 | 8.54 | -9 | 2.03E+03 | -116 |
| FD | 1.11E+03 | 2.13 | -33 | 1.08E+03 | -94 |
| L1 | 1.16E+03 | 5.52E-02 | -43 | 1.22E+03 | 78 |
| L3 | 1.16E+03 | 5.57E-02 | -44 | 1.22E+03 | 78 |
| L4 | 400. | 201. | -134 | 2.68E+03 | -26 |
| NF | — | — | — | — | — |
| NS | 265. | 34.1 | -171 | 5.89E+03 | 48 |

Table D–928. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -276. | 3.86E+03 | -167. | 3.78E+03 |
| A2 | -276. | 3.86E+03 | -167. | 3.78E+03 |
| FD | -2.84 | 2.17E+03 | 11.9 | 2.15E+03 |
| L1 | -58.5 | 2.39E+03 | -38.3 | 2.39E+03 |
| L3 | -58.5 | 2.39E+03 | -38.3 | 2.39E+03 |
| L4 | -4.08E+03 | 5.17E+03 | -2.67E+03 | 3.92E+03 |
| NF | — | — | — | — |
| NS | -6.51E+03 | 7.89E+03 | -6.30E+03 | 7.62E+03 |




Data identically zero, insufficient, or not available from NFA.

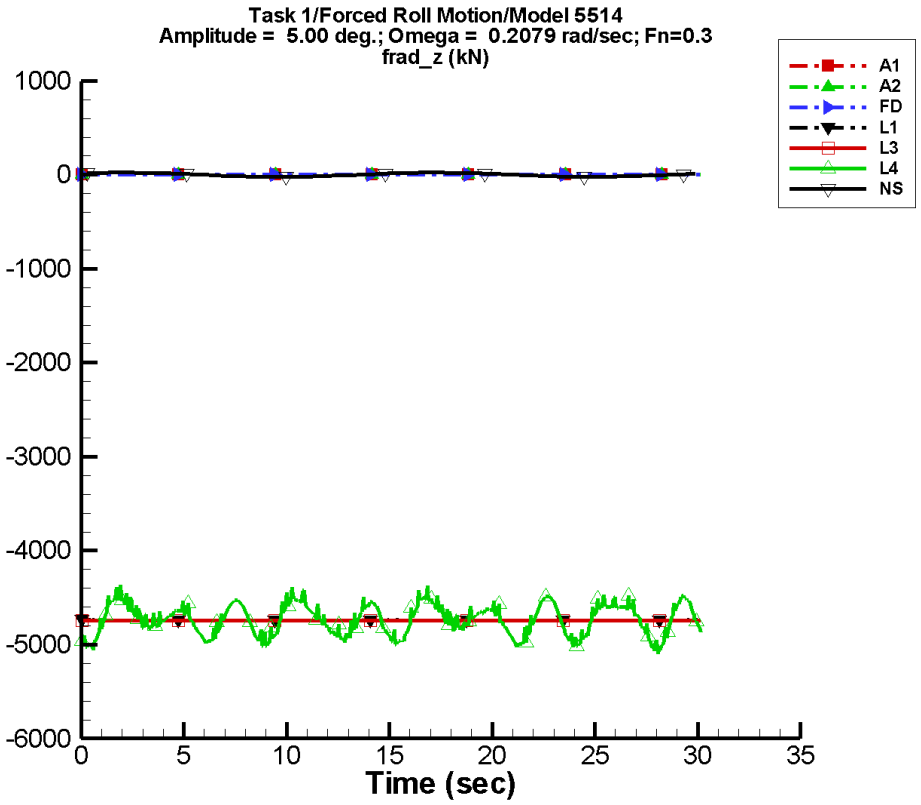
Figure D–465. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–929. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.57E+03 | 25.1 | -11 | 3.81E+03 | -117 |
| A2 | 3.57E+03 | 25.1 | -11 | 3.81E+03 | -117 |
| FD | 2.12E+03 | 8.80 | -33 | 2.01E+03 | -94 |
| L1 | 2.43E+03 | 7.78E-02 | -35 | 2.55E+03 | 78 |
| L3 | 2.43E+03 | 7.60E-02 | -36 | 2.55E+03 | 78 |
| L4 | 1.42E+03 | 777. | -143 | 4.92E+03 | 31 |
| NF | — | — | — | — | — |
| NS | 1.04E+03 | 91.9 | 157 | 1.16E+04 | 48 |

Table D–930. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -574. | 7.20E+03 | -343. | 7.06E+03 |
| A2 | -574. | 7.20E+03 | -343. | 7.06E+03 |
| FD | -5.92 | 4.02E+03 | 27.6 | 4.00E+03 |
| L1 | -122. | 4.98E+03 | -80.0 | 4.98E+03 |
| L3 | -122. | 4.98E+03 | -80.0 | 4.98E+03 |
| L4 | -8.27E+03 | 1.18E+04 | -7.25E+03 | 9.00E+03 |
| NF | — | — | — | — |
| NS | -1.39E+04 | 2.26E+04 | -1.22E+04 | 2.02E+04 |




Data identically zero, insufficient, or not available from NFA.

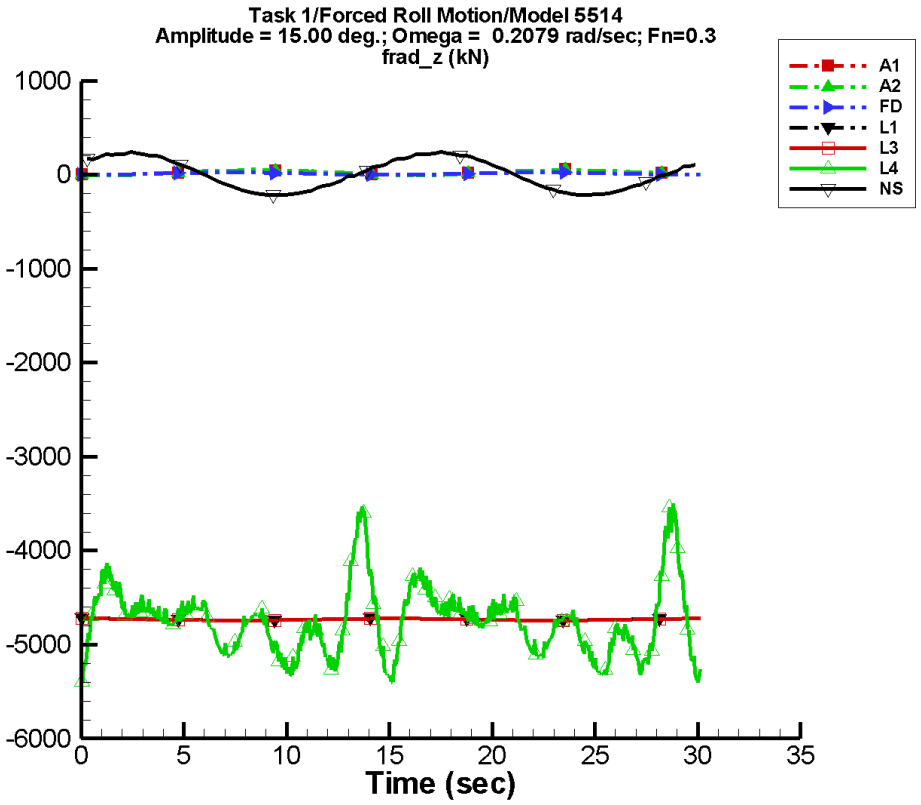
Figure D–466. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–931. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.70 | 6.61E-02 | 33 | 3.00 | -116 |
| A2 | 2.70 | 6.61E-02 | 33 | 3.00 | -116 |
| FD | 1.42 | 8.99E-06 | 19 | 1.43 | -86 |
| L1 | -4.74E+03 | 8.58E-02 | -173 | 1.08 | 87 |
| L3 | -4.74E+03 | 9.47E-02 | -160 | 1.09 | 87 |
| L4 | -4.74E+03 | 1.80 | 57 | 12.5 | 16 |
| NF | — | — | — | — | — |
| NS | 0.722 | 8.61E-02 | -20 | 23.5 | 39 |

Table D–932. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -0.369 | 6.40 | -0.302 | 6.29 |
| A2 | -0.369 | 6.40 | -0.302 | 6.29 |
| FD | -3.45E-03 | 2.85 | 2.02E-03 | 2.84 |
| L1 | -4.74E+03 | -4.74E+03 | -4.74E+03 | -4.74E+03 |
| L3 | -4.74E+03 | -4.74E+03 | -4.74E+03 | -4.74E+03 |
| L4 | -5.11E+03 | -4.37E+03 | -5.04E+03 | -4.49E+03 |
| NF | — | — | — | — |
| NS | -24.2 | 24.5 | -22.6 | 23.0 |




Data identically zero, insufficient, or not available from NFA.

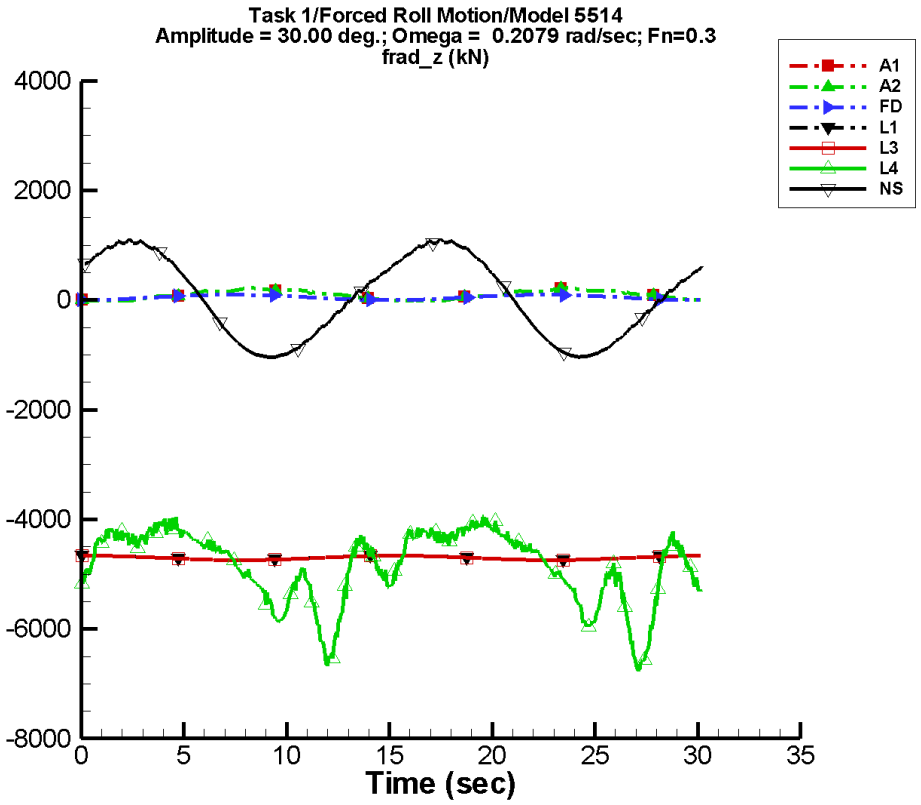
Figure D–467. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–933. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 24.1 | 0.186 | 39 | 26.7 | -116 |
| A2 | 24.1 | 0.186 | 39 | 26.7 | -116 |
| FD | 12.7 | 7.21E-04 | 21 | 12.7 | -86 |
| L1 | -4.73E+03 | 8.21E-02 | -175 | 10.0 | 86 |
| L3 | -4.73E+03 | 9.11E-02 | -160 | 10.0 | 86 |
| L4 | -4.76E+03 | 8.21 | -81 | 220. | 49 |
| NF | — | — | — | — | — |
| NS | 8.17 | 0.528 | -35 | 223. | 39 |

Table D–934. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -3.12 | 56.7 | -2.66 | 55.7 |
| A2 | -3.12 | 56.7 | -2.66 | 55.7 |
| FD | -3.10E-02 | 25.4 | 1.89E-02 | 25.3 |
| L1 | -4.74E+03 | -4.72E+03 | -4.74E+03 | -4.72E+03 |
| L3 | -4.74E+03 | -4.72E+03 | -4.74E+03 | -4.72E+03 |
| L4 | -5.42E+03 | -3.49E+03 | -5.34E+03 | -3.67E+03 |
| NF | — | — | — | — |
| NS | -219. | 249. | -210. | 225. |




Data identically zero, insufficient, or not available from NFA.

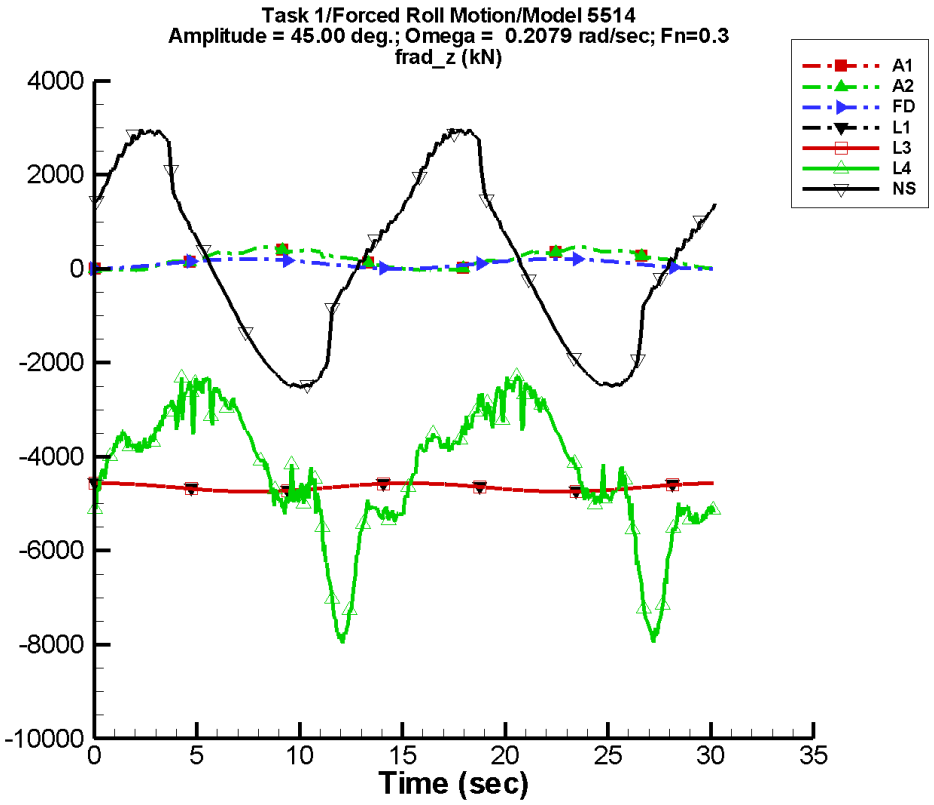
Figure D–468. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–935. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 93.8 | 0.344 | 44 | 104. | -117 |
| A2 | 93.8 | 0.344 | 44 | 104. | -117 |
| FD | 49.5 | 1.14E-02 | 21 | 49.1 | -86 |
| L1 | -4.70E+03 | 8.37E-02 | -178 | 40.1 | 85 |
| L3 | -4.70E+03 | 8.31E-02 | -164 | 40.1 | 85 |
| L4 | -4.87E+03 | 21.5 | -101 | 770. | 3 |
| NF | — | — | — | — | — |
| NS | 37.8 | 2.86 | -31 | 1.03E+03 | 42 |

Table D–936. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -12.7 | 219. | -10.9 | 215. |
| A2 | -12.7 | 219. | -10.9 | 215. |
| FD | -0.124 | 98.0 | 8.47E-02 | 97.8 |
| L1 | -4.74E+03 | -4.66E+03 | -4.74E+03 | -4.66E+03 |
| L3 | -4.74E+03 | -4.66E+03 | -4.74E+03 | -4.66E+03 |
| L4 | -6.81E+03 | -3.94E+03 | -6.65E+03 | -4.06E+03 |
| NF | — | — | — | — |
| NS | -1.05E+03 | 1.13E+03 | -1.03E+03 | 1.07E+03 |




Data identically zero, insufficient, or not available from NFA.

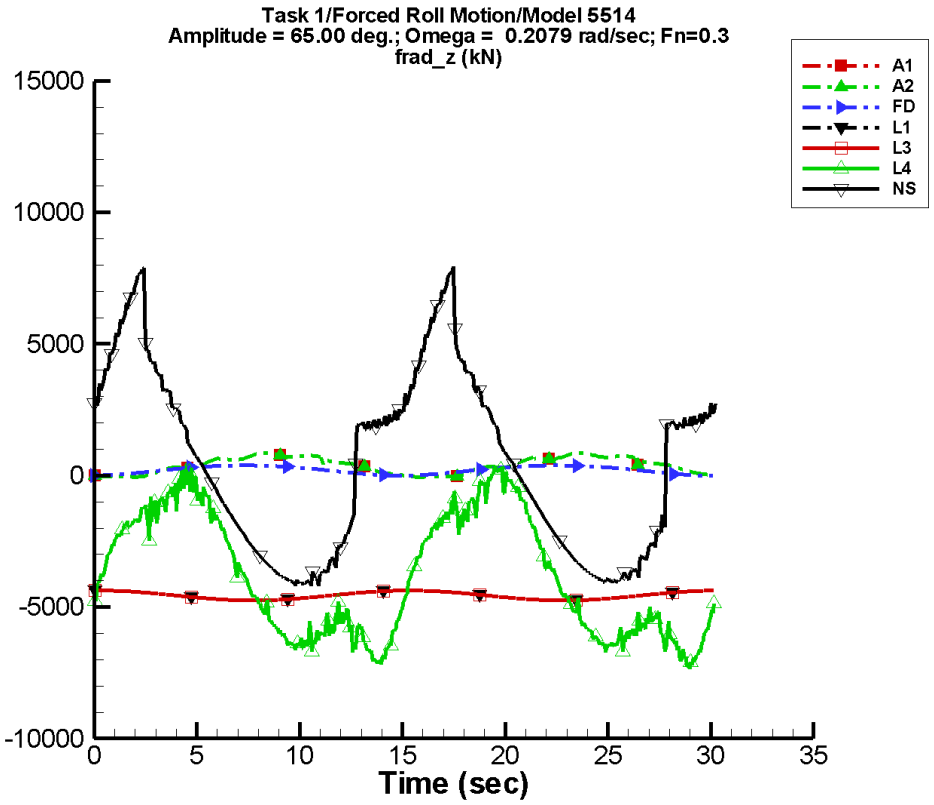
Figure D–469. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–937. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 202. | 0.493 | 36 | 221. | -117 |
| A2 | 202. | 0.493 | 36 | 221. | -117 |
| FD | 107. | 5.61E-02 | 21 | 104. | -86 |
| L1 | -4.65E+03 | 8.14E-02 | 177 | 90.3 | 85 |
| L3 | -4.65E+03 | 7.58E-02 | -166 | 90.3 | 85 |
| L4 | -4.33E+03 | 31.8 | 139 | 1.74E+03 | -24 |
| NF | — | — | — | — | — |
| NS | 134. | 6.81 | -29 | 2.49E+03 | 43 |

Table D–938. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -28.8 | 466. | -24.7 | 458. |
| A2 | -28.8 | 466. | -24.7 | 458. |
| FD | -0.279 | 208. | 0.224 | 208. |
| L1 | -4.74E+03 | -4.56E+03 | -4.74E+03 | -4.56E+03 |
| L3 | -4.74E+03 | -4.56E+03 | -4.74E+03 | -4.56E+03 |
| L4 | -7.96E+03 | -2.28E+03 | -7.82E+03 | -2.42E+03 |
| NF | — | — | — | — |
| NS | -2.54E+03 | 3.00E+03 | -2.51E+03 | 2.96E+03 |




Data identically zero, insufficient, or not available from NFA.

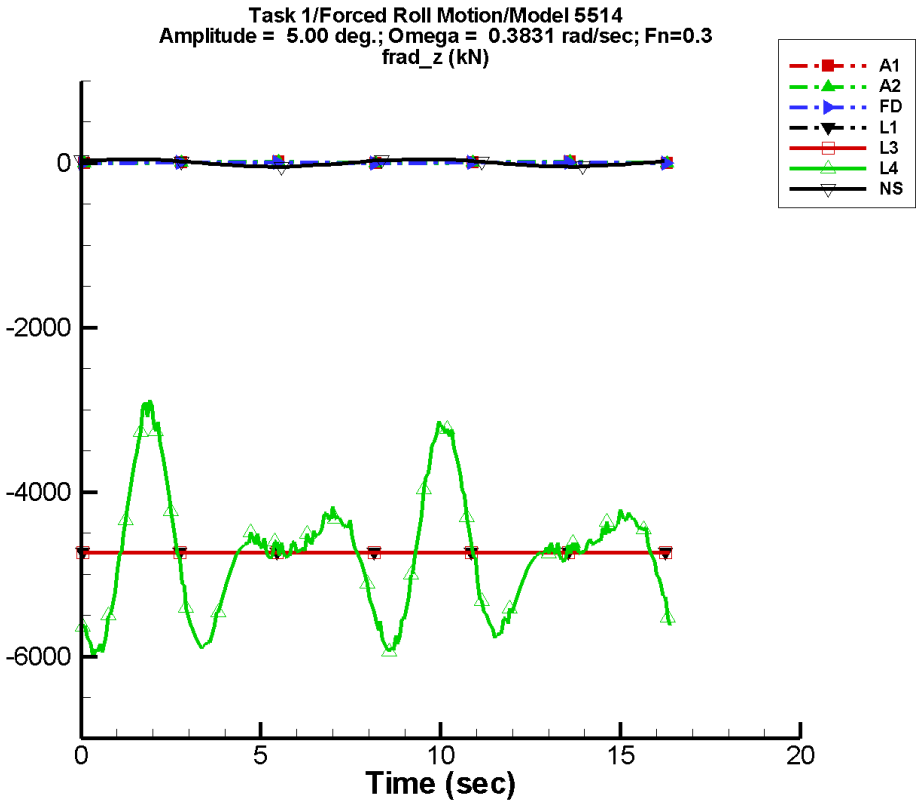
Figure D–470. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–939. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 386. | 0.950 | 3 | 416. | -119 |
| A2 | 386. | 0.950 | 3 | 416. | -119 |
| FD | 204. | 0.231 | 21 | 193. | -85 |
| L1 | -4.56E+03 | 8.21E-02 | 171 | 188. | 85 |
| L3 | -4.56E+03 | 7.00E-02 | -173 | 188. | 85 |
| L4 | -3.81E+03 | 93.8 | -96 | 3.04E+03 | -4 |
| NF | — | — | — | — | — |
| NS | 380. | 8.50 | -11 | 4.69E+03 | 47 |

Table D–940. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -60.2 | 867. | -51.6 | 852. |
| A2 | -60.2 | 867. | -51.6 | 852. |
| FD | -0.583 | 385. | 0.473 | 385. |
| L1 | -4.75E+03 | -4.37E+03 | -4.75E+03 | -4.37E+03 |
| L3 | -4.75E+03 | -4.37E+03 | -4.75E+03 | -4.37E+03 |
| L4 | -7.33E+03 | 372. | -7.11E+03 | 166. |
| NF | — | — | — | — |
| NS | -4.21E+03 | 7.94E+03 | -4.11E+03 | 7.41E+03 |




Data identically zero, insufficient, or not available from NFA.

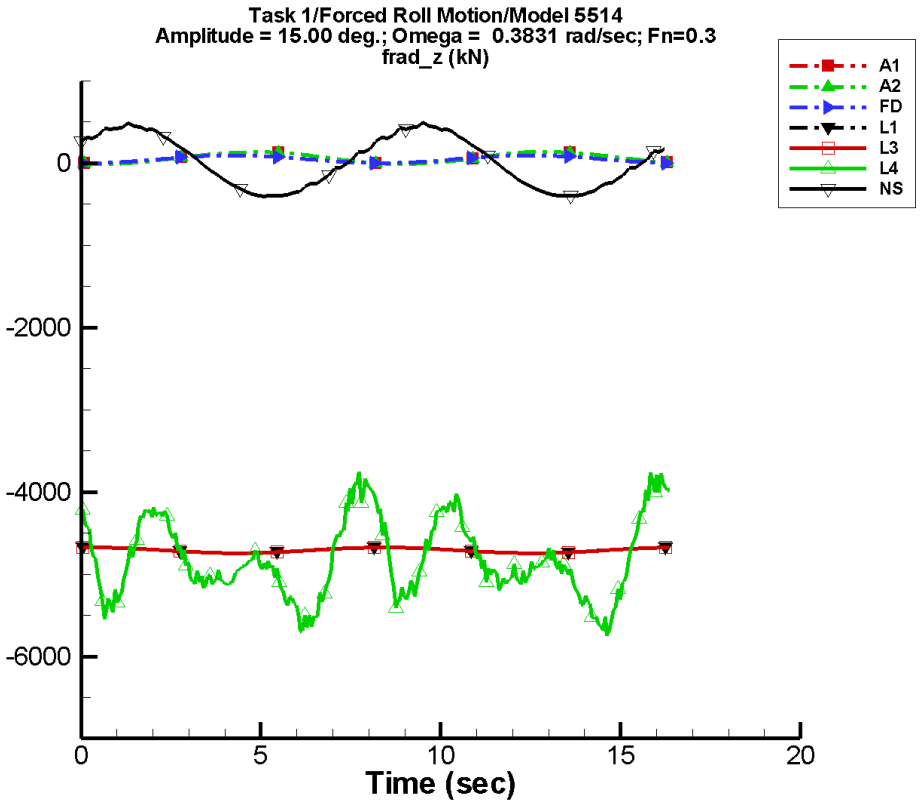
Figure D–471. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–941. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 7.00 | 4.14E-02 | -30 | 8.13 | -121 |
| A2 | 7.00 | 4.14E-02 | -30 | 8.13 | -121 |
| FD | 5.26 | 8.10E-05 | -65 | 5.30 | -97 |
| L1 | -4.74E+03 | 3.89E-02 | 69 | 3.87 | 79 |
| L3 | -4.74E+03 | 4.14E-02 | 84 | 3.87 | 79 |
| L4 | -4.74E+03 | 72.4 | -13 | 185. | -14 |
| NF | — | — | — | — | — |
| NS | 2.27 | 0.108 | -155 | 45.2 | 34 |

Table D–942. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -1.34 | 15.4 | -1.17 | 15.2 |
| A2 | -1.34 | 15.4 | -1.17 | 15.2 |
| FD | -3.90E-02 | 10.6 | -3.63E-02 | 10.5 |
| L1 | -4.74E+03 | -4.73E+03 | -4.74E+03 | -4.73E+03 |
| L3 | -4.74E+03 | -4.73E+03 | -4.74E+03 | -4.73E+03 |
| L4 | -6.05E+03 | -2.82E+03 | -6.01E+03 | -2.99E+03 |
| NF | — | — | — | — |
| NS | -46.0 | 48.8 | -42.1 | 45.1 |




Data identically zero, insufficient, or not available from NFA.

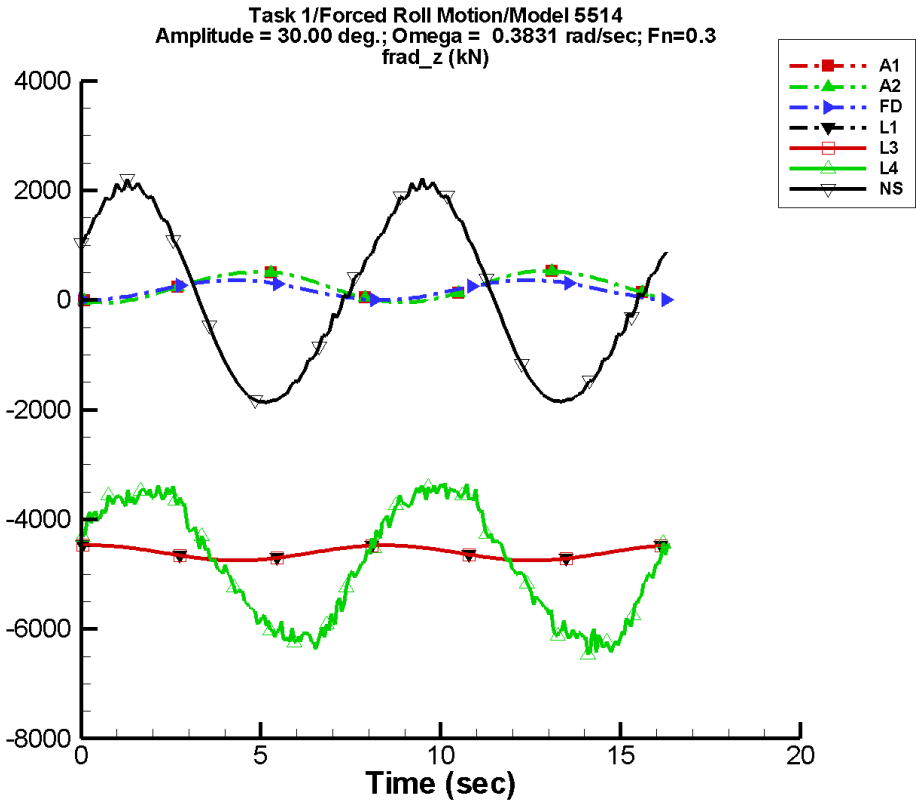
Figure D–472. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–943. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 62.5 | 9.55E-02 | -159 | 72.4 | -121 |
| A2 | 62.5 | 9.55E-02 | -159 | 72.4 | -121 |
| FD | 47.0 | 6.48E-03 | -65 | 47.2 | -97 |
| L1 | -4.71E+03 | 4.81E-02 | 65 | 34.8 | 79 |
| L3 | -4.71E+03 | 4.17E-02 | 77 | 34.8 | 79 |
| L4 | -4.83E+03 | 52.5 | -100 | 272. | 40 |
| NF | — | — | — | — | — |
| NS | 20.9 | 1.33 | -162 | 426. | 35 |

Table D–944. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -12.0 | 137. | -10.4 | 136. |
| A2 | -12.0 | 137. | -10.4 | 136. |
| FD | -0.351 | 94.1 | -0.326 | 93.4 |
| L1 | -4.74E+03 | -4.67E+03 | -4.74E+03 | -4.67E+03 |
| L3 | -4.74E+03 | -4.67E+03 | -4.74E+03 | -4.67E+03 |
| L4 | -5.75E+03 | -3.76E+03 | -5.61E+03 | -3.90E+03 |
| NF | — | — | — | — |
| NS | -401. | 496. | -389. | 442. |




Data identically zero, insufficient, or not available from NFA.

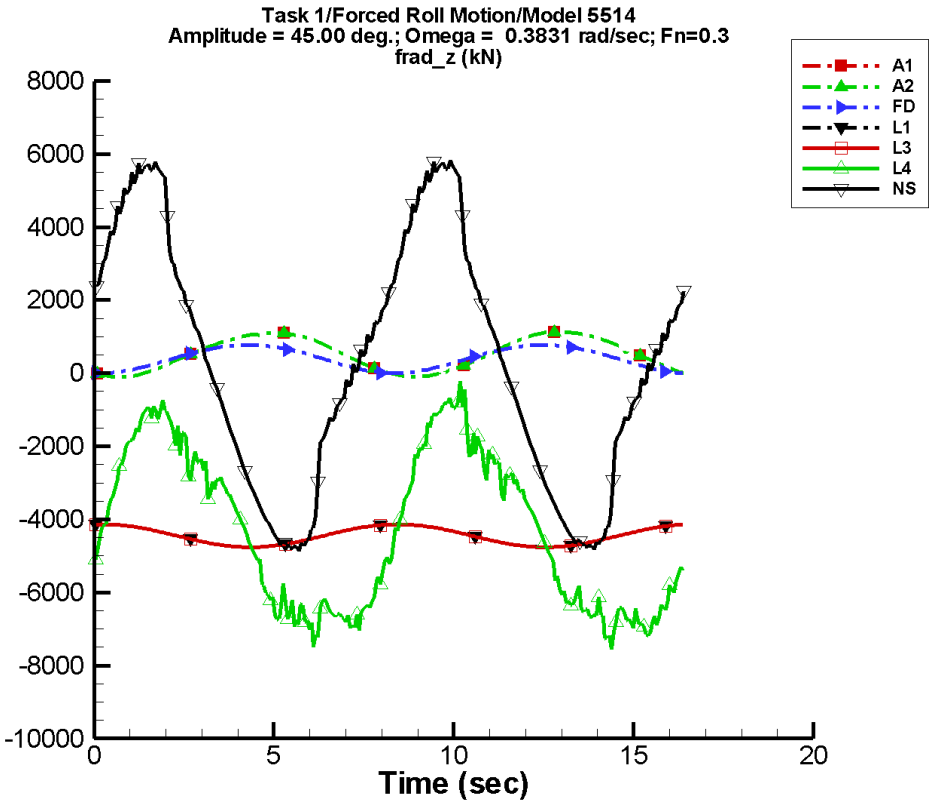
Figure D–473. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–945. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 243. | 0.630 | -175 | 281. | -121 |
| A2 | 243. | 0.630 | -175 | 281. | -121 |
| FD | 183. | 0.102 | -65 | 182. | -97 |
| L1 | -4.61E+03 | 6.20E-02 | 62 | 139. | 79 |
| L3 | -4.61E+03 | 4.64E-02 | 67 | 139. | 79 |
| L4 | -4.80E+03 | 35.5 | -74 | 1.41E+03 | 14 |
| NF | — | — | — | — | — |
| NS | 83.8 | 5.90 | -161 | 1.94E+03 | 37 |

Table D–946. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -47.7 | 532. | -41.5 | 527. |
| A2 | -47.7 | 532. | -41.5 | 527. |
| FD | -1.40 | 364. | -1.29 | 361. |
| L1 | -4.75E+03 | -4.47E+03 | -4.75E+03 | -4.47E+03 |
| L3 | -4.75E+03 | -4.47E+03 | -4.75E+03 | -4.47E+03 |
| L4 | -6.47E+03 | -3.32E+03 | -6.30E+03 | -3.44E+03 |
| NF | — | — | — | — |
| NS | -1.87E+03 | 2.25E+03 | -1.84E+03 | 2.09E+03 |




Data identically zero, insufficient, or not available from NFA.

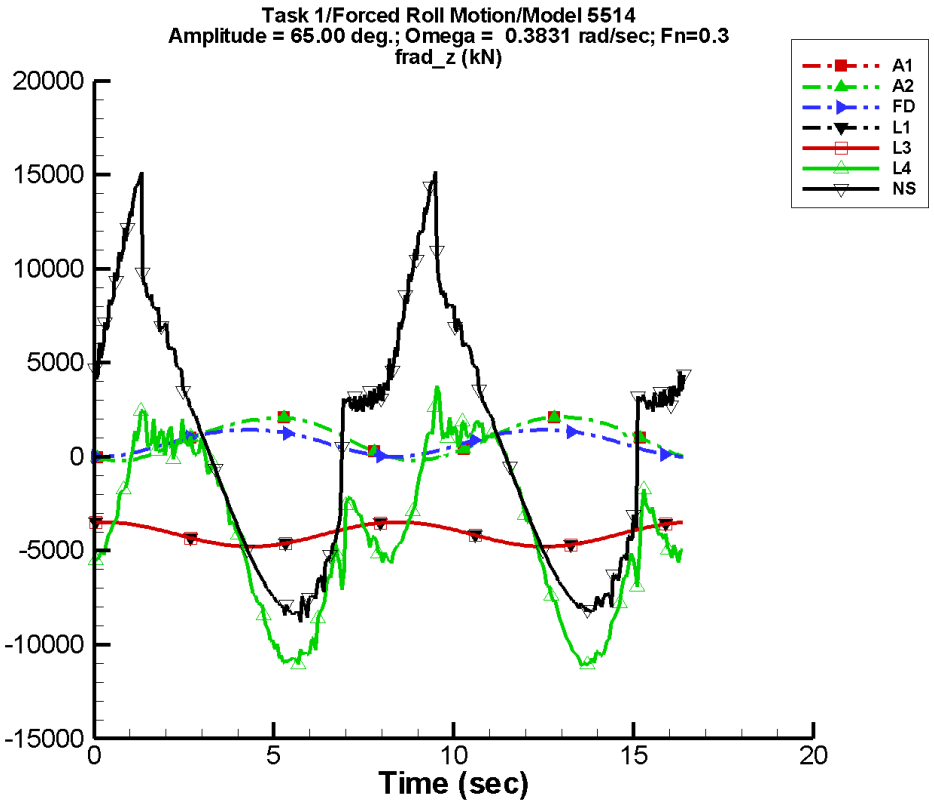
Figure D–474. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–947. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 524. | 1.18 | -167 | 602. | -122 |
| A2 | 524. | 1.18 | -167 | 602. | -122 |
| FD | 395. | 0.502 | -65 | 387. | -97 |
| L1 | -4.45E+03 | 7.55E-02 | 58 | 313. | 79 |
| L3 | -4.45E+03 | 5.17E-02 | 58 | 313. | 79 |
| L4 | -4.31E+03 | 26.1 | -34 | 2.96E+03 | -3 |
| NF | — | — | — | — | — |
| NS | 268. | 14.5 | -159 | 4.68E+03 | 37 |

Table D–948. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -107. | 1.13E+03 | -92.9 | 1.12E+03 |
| A2 | -107. | 1.13E+03 | -92.9 | 1.12E+03 |
| FD | -3.16 | 772. | -2.87 | 767. |
| L1 | -4.76E+03 | -4.14E+03 | -4.76E+03 | -4.14E+03 |
| L3 | -4.76E+03 | -4.14E+03 | -4.76E+03 | -4.14E+03 |
| L4 | -7.54E+03 | -218. | -6.99E+03 | -772. |
| NF | — | — | — | — |
| NS | -4.86E+03 | 5.88E+03 | -4.77E+03 | 5.77E+03 |




Data identically zero, insufficient, or not available from NFA.

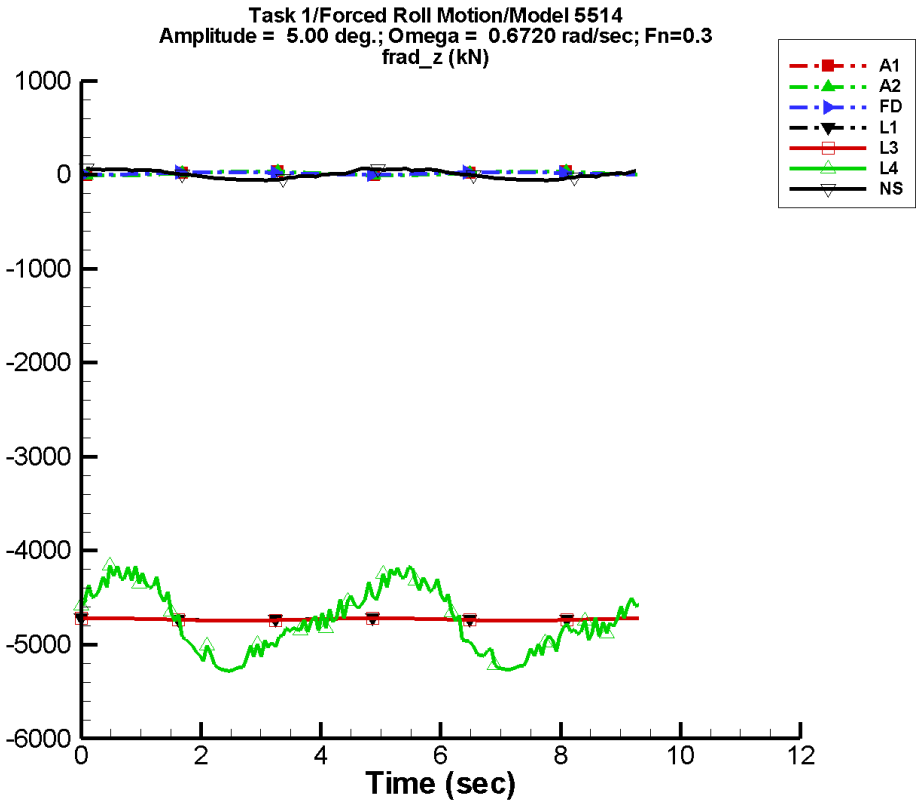
Figure D–475. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–949. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.00E+03 | 1.55 | -110 | 1.14E+03 | -124 |
| A2 | 1.00E+03 | 1.55 | -110 | 1.14E+03 | -124 |
| FD | 755. | 2.07 | -66 | 715. | -98 |
| L1 | -4.13E+03 | 9.57E-02 | 55 | 653. | 79 |
| L3 | -4.13E+03 | 5.94E-02 | 52 | 653. | 79 |
| L4 | -4.03E+03 | 336. | -113 | 5.20E+03 | 9 |
| NF | — | — | — | — | — |
| NS | 816. | 35.8 | 172 | 8.91E+03 | 41 |

Table D–950. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -221. | 2.11E+03 | -192. | 2.10E+03 |
| A2 | -221. | 2.11E+03 | -192. | 2.10E+03 |
| FD | -6.59 | 1.43E+03 | -5.83 | 1.42E+03 |
| L1 | -4.78E+03 | -3.48E+03 | -4.78E+03 | -3.48E+03 |
| L3 | -4.78E+03 | -3.48E+03 | -4.78E+03 | -3.48E+03 |
| L4 | -1.11E+04 | 3.77E+03 | -1.09E+04 | 2.08E+03 |
| NF | — | — | — | — |
| NS | -8.79E+03 | 1.53E+04 | -8.29E+03 | 1.41E+04 |




Data identically zero, insufficient, or not available from NFA.

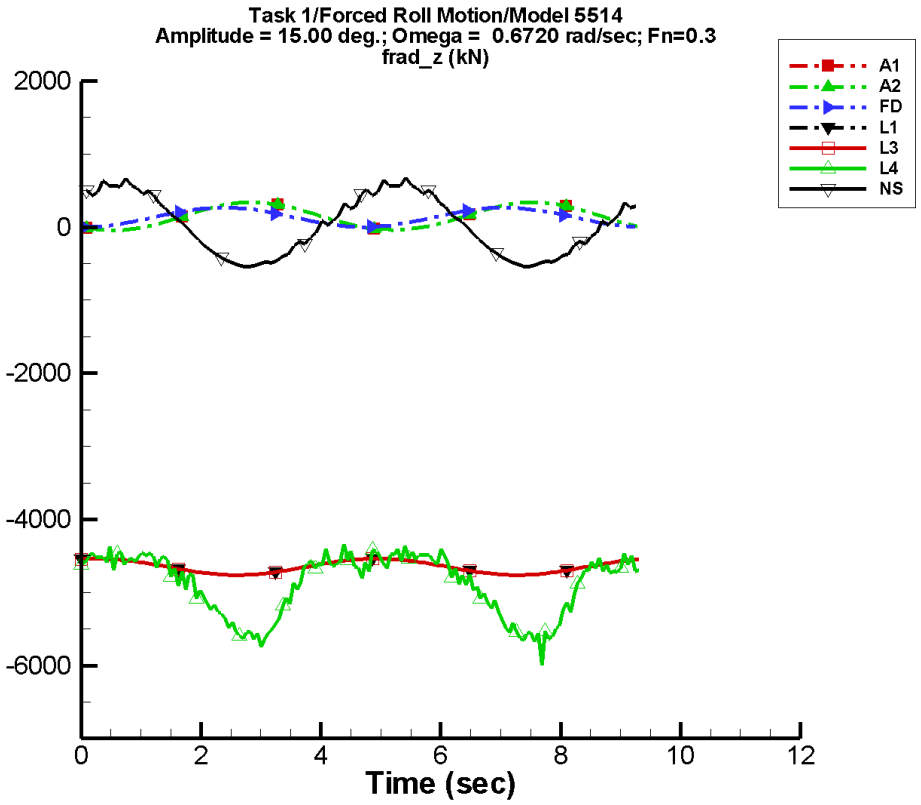
Figure D–476. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–951. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 16.3 | 0.110 | -19 | 21.3 | -130 |
| A2 | 16.3 | 0.110 | -19 | 21.3 | -130 |
| FD | 14.8 | 3.41E-04 | -44 | 14.9 | -94 |
| L1 | -4.73E+03 | 1.80E-02 | 106 | 12.4 | 70 |
| L3 | -4.73E+03 | 1.90E-02 | 145 | 12.4 | 70 |
| L4 | -4.74E+03 | 16.9 | 12 | 437. | 53 |
| NF | — | — | — | — | — |
| NS | 4.17 | 0.364 | -173 | 58.3 | 47 |

Table D–952. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -5.04 | 38.2 | -4.02 | 37.1 |
| A2 | -5.04 | 38.2 | -4.02 | 37.1 |
| FD | -3.50E-02 | 29.7 | 0.130 | 29.4 |
| L1 | -4.74E+03 | -4.72E+03 | -4.74E+03 | -4.72E+03 |
| L3 | -4.74E+03 | -4.72E+03 | -4.74E+03 | -4.72E+03 |
| L4 | -5.28E+03 | -4.14E+03 | -5.25E+03 | -4.21E+03 |
| NF | — | — | — | — |
| NS | -60.3 | 70.5 | -54.5 | 61.8 |




Data identically zero, insufficient, or not available from NFA.

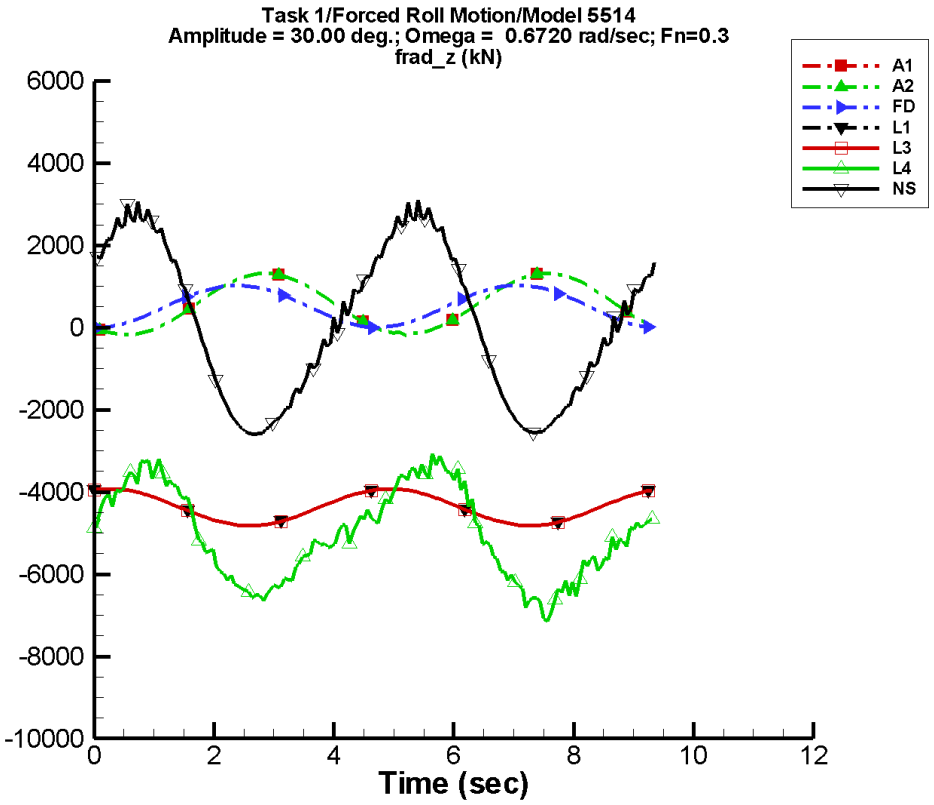
Figure D–477. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–953. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 145. | 0.902 | 17 | 190. | -131 |
| A2 | 145. | 0.902 | 17 | 190. | -131 |
| FD | 133. | 2.75E-02 | -34 | 132. | -94 |
| L1 | -4.65E+03 | 1.88E-02 | 67 | 112. | 70 |
| L3 | -4.65E+03 | 1.30E-02 | 131 | 112. | 70 |
| L4 | -4.89E+03 | 36.3 | -55 | 507. | 54 |
| NF | — | — | — | — | — |
| NS | 31.1 | 3.68 | -175 | 557. | 48 |

Table D–954. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -45.9 | 340. | -35.6 | 331. |
| A2 | -45.9 | 340. | -35.6 | 331. |
| FD | -0.315 | 265. | 1.19 | 262. |
| L1 | -4.76E+03 | -4.54E+03 | -4.76E+03 | -4.54E+03 |
| L3 | -4.76E+03 | -4.54E+03 | -4.76E+03 | -4.54E+03 |
| L4 | -5.99E+03 | -4.31E+03 | -5.65E+03 | -4.47E+03 |
| NF | — | — | — | — |
| NS | -543. | 686. | -513. | 585. |




Data identically zero, insufficient, or not available from NFA.

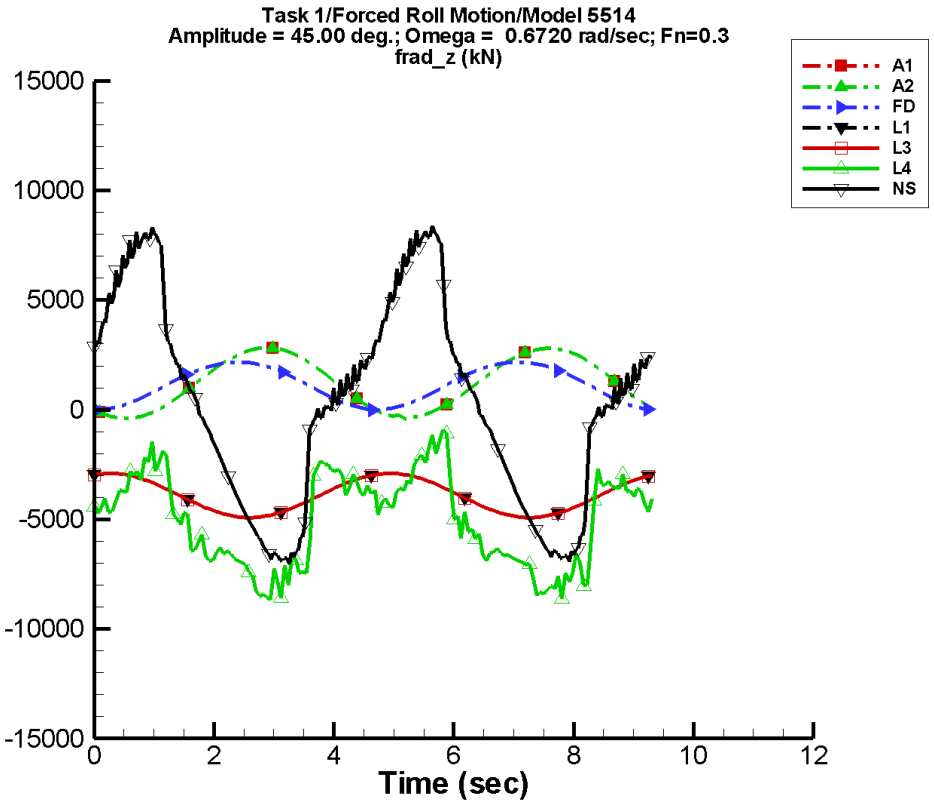
Figure D–478. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–955. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 565. | 3.95 | 21 | 741. | -131 |
| A2 | 565. | 3.95 | 21 | 741. | -131 |
| FD | 516. | 0.433 | -33 | 512. | -94 |
| L1 | -4.37E+03 | 3.49E-02 | 20 | 447. | 70 |
| L3 | -4.37E+03 | 6.06E-03 | 20 | 447. | 70 |
| L4 | -5.03E+03 | 113. | -58 | 1.48E+03 | 37 |
| NF | — | — | — | — | — |
| NS | 96.8 | 17.1 | -176 | 2.56E+03 | 48 |

Table D–956. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -183. | 1.32E+03 | -141. | 1.28E+03 |
| A2 | -183. | 1.32E+03 | -141. | 1.28E+03 |
| FD | -1.26 | 1.02E+03 | 4.95 | 1.01E+03 |
| L1 | -4.82E+03 | -3.93E+03 | -4.81E+03 | -3.93E+03 |
| L3 | -4.82E+03 | -3.93E+03 | -4.81E+03 | -3.93E+03 |
| L4 | -7.15E+03 | -3.07E+03 | -6.77E+03 | -3.37E+03 |
| NF | — | — | — | — |
| NS | -2.60E+03 | 3.16E+03 | -2.55E+03 | 2.82E+03 |




Data identically zero, insufficient, or not available from NFA.

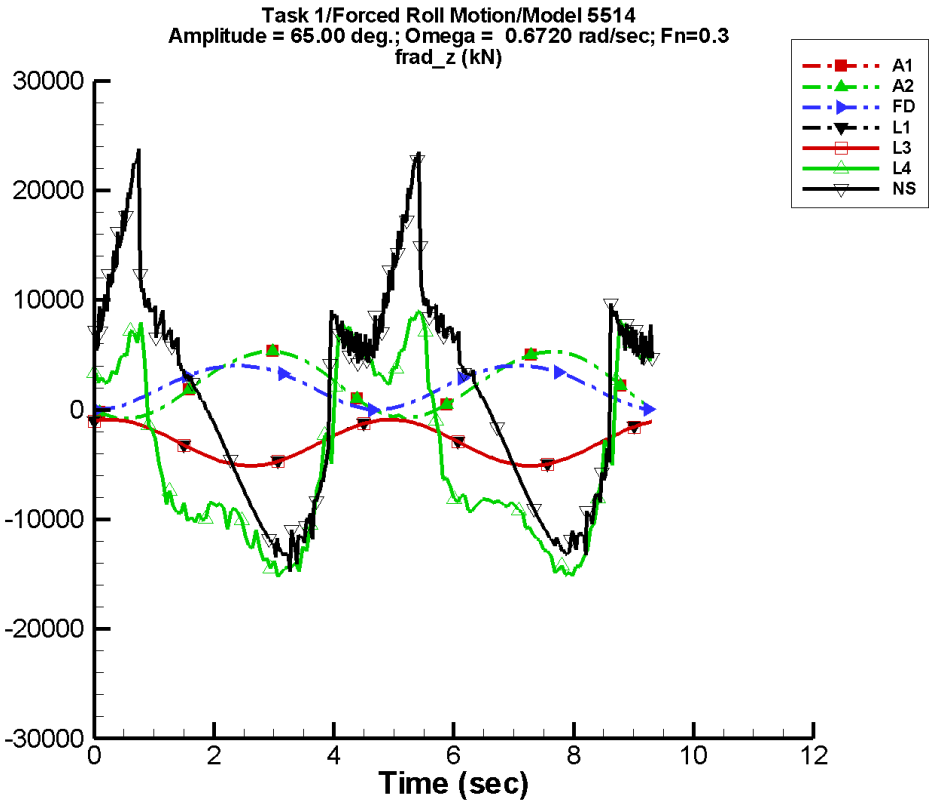
Figure D–479. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–957. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.22E+03 | 9.81 | 16 | 1.59E+03 | -132 |
| A2 | 1.22E+03 | 9.81 | 16 | 1.59E+03 | -132 |
| FD | 1.11E+03 | 2.13 | -33 | 1.08E+03 | -94 |
| L1 | -3.91E+03 | 5.22E-02 | 12 | 1.01E+03 | 70 |
| L3 | -3.91E+03 | 1.79E-02 | -9 | 1.01E+03 | 70 |
| L4 | -5.07E+03 | 271. | -80 | 2.36E+03 | 58 |
| NF | — | — | — | — | — |
| NS | 330. | 36.9 | -175 | 6.26E+03 | 43 |

Table D–958. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -410. | 2.82E+03 | -314. | 2.75E+03 |
| A2 | -410. | 2.82E+03 | -314. | 2.75E+03 |
| FD | -2.84 | 2.17E+03 | 11.9 | 2.15E+03 |
| L1 | -4.92E+03 | -2.91E+03 | -4.90E+03 | -2.92E+03 |
| L3 | -4.92E+03 | -2.91E+03 | -4.90E+03 | -2.92E+03 |
| L4 | -8.64E+03 | -898. | -8.15E+03 | -1.74E+03 |
| NF | — | — | — | — |
| NS | -7.03E+03 | 8.51E+03 | -6.81E+03 | 8.19E+03 |




Data identically zero, insufficient, or not available from NFA.

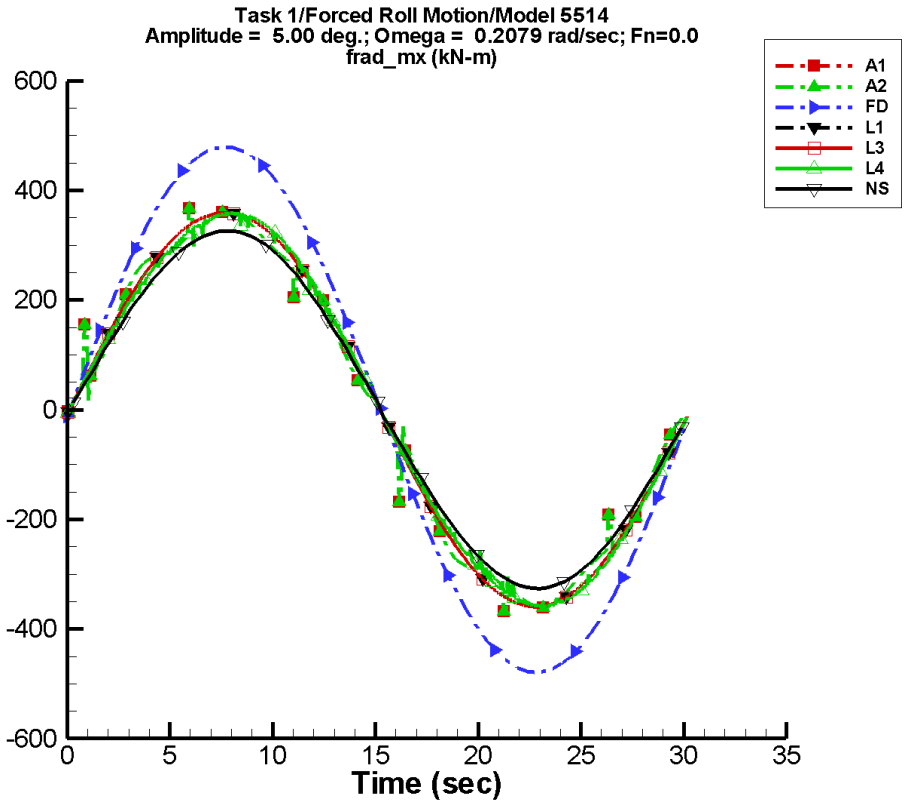
Figure D–480. Time history of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–959. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN) | $a_1$ (kN) | $\Phi_1$ (deg) | $a_2$ (kN) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.33E+03 | 24.3 | 6 | 3.04E+03 | -133 |
| A2 | 2.33E+03 | 24.3 | 6 | 3.04E+03 | -133 |
| FD | 2.12E+03 | 8.80 | -33 | 2.01E+03 | -94 |
| L1 | -3.02E+03 | 8.31E-02 | 5 | 2.10E+03 | 70 |
| L3 | -3.02E+03 | 3.34E-02 | -12 | 2.10E+03 | 70 |
| L4 | -4.67E+03 | 849. | -137 | 9.74E+03 | 72 |
| NF | — | — | — | — | — |
| NS | 1.27E+03 | 104. | 165 | 1.26E+04 | 43 |

Table D–960. Minimum and maximum of of $F_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN) | Maximum (kN) | Minimum (kN) | Maximum (kN) |
| A1 | -846. | 5.31E+03 | -645. | 5.18E+03 |
| A2 | -846. | 5.31E+03 | -645. | 5.18E+03 |
| FD | -5.92 | 4.02E+03 | 27.6 | 4.00E+03 |
| L1 | -5.12E+03 | -916. | -5.08E+03 | -945. |
| L3 | -5.12E+03 | -916. | -5.08E+03 | -945. |
| L4 | -1.53E+04 | 8.99E+03 | -1.46E+04 | 7.06E+03 |
| NF | — | — | — | — |
| NS | -1.47E+04 | 2.40E+04 | -1.31E+04 | 2.15E+04 |




Data identically zero, insufficient, or not available from NFA.

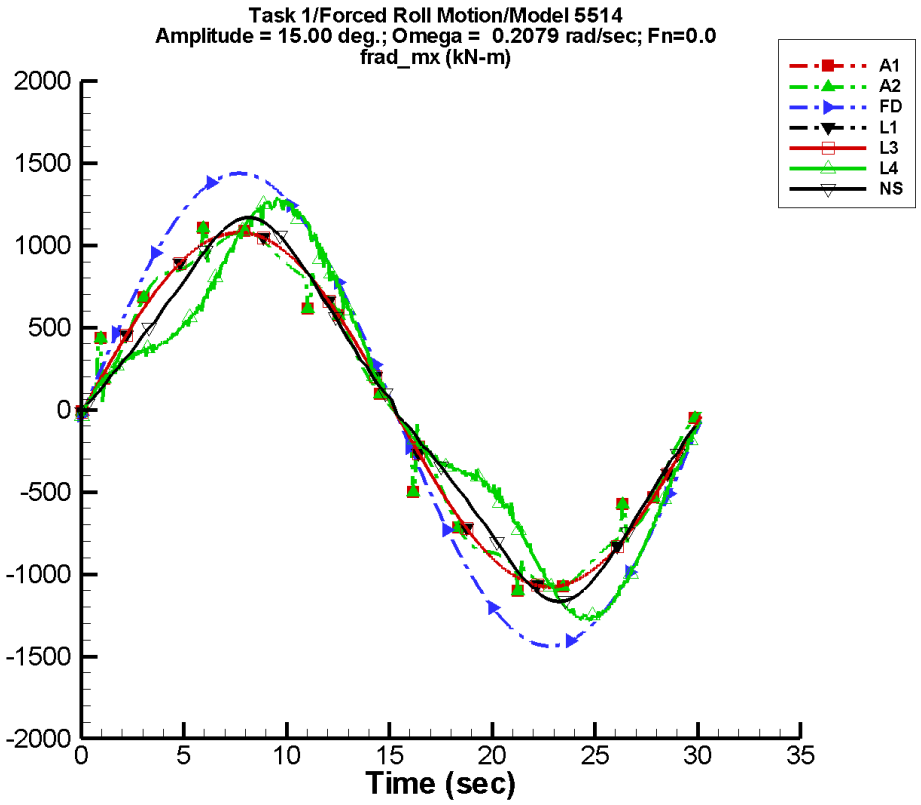
Figure D–481. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–961. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.373 | 350. | 0 | 0.220 | 13 |
| A2 | -0.373 | 350. | 0 | 0.220 | 13 |
| FD | -1.86E-05 | 479. | -2 | 7.19E-05 | 111 |
| L1 | 5.51E-03 | 359. | -1 | 3.86E-02 | 163 |
| L3 | 5.49E-03 | 359. | -1 | 3.86E-02 | 163 |
| L4 | 0.182 | 355. | -3 | 0.671 | 172 |
| NF | — | — | — | — | — |
| NS | -1.02E-02 | 324. | -2 | 1.02E-02 | 4 |

Table D–962. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -371. | 372. | -360. | 361. |
| A2 | -371. | 372. | -360. | 361. |
| FD | -479. | 479. | -479. | 479. |
| L1 | -359. | 360. | -359. | 360. |
| L3 | -359. | 360. | -359. | 360. |
| L4 | -358. | 358. | -358. | 358. |
| NF | — | — | — | — |
| NS | -326. | 326. | -323. | 323. |




Data identically zero, insufficient, or not available from NFA.

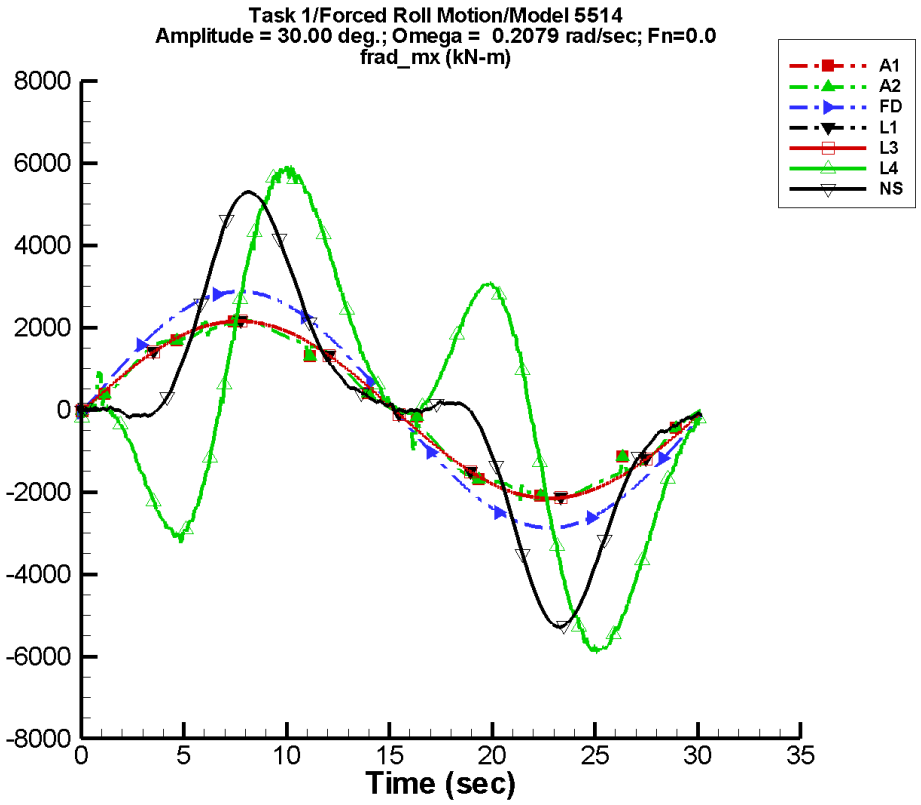
Figure D–482. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–963. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.12 | 1.05E+03 | 0 | 0.659 | 13 |
| A2 | -1.12 | 1.05E+03 | 0 | 0.659 | 13 |
| FD | -7.87E-05 | 1.44E+03 | -2 | 1.58E-04 | 55 |
| L1 | 1.66E-02 | 1.08E+03 | -1 | 0.116 | 163 |
| L3 | 1.66E-02 | 1.08E+03 | -1 | 0.116 | 163 |
| L4 | 7.30 | 1.06E+03 | -14 | 42.7 | 155 |
| NF | — | — | — | — | — |
| NS | -0.269 | 1.05E+03 | -5 | 0.213 | 64 |

Table D–964. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.11E+03 | 1.12E+03 | -1.08E+03 | 1.08E+03 |
| A2 | -1.11E+03 | 1.12E+03 | -1.08E+03 | 1.08E+03 |
| FD | -1.44E+03 | 1.44E+03 | -1.44E+03 | 1.44E+03 |
| L1 | -1.08E+03 | 1.08E+03 | -1.08E+03 | 1.08E+03 |
| L3 | -1.08E+03 | 1.08E+03 | -1.08E+03 | 1.08E+03 |
| L4 | -1.28E+03 | 1.28E+03 | -1.26E+03 | 1.27E+03 |
| NF | — | — | — | — |
| NS | -1.17E+03 | 1.17E+03 | -1.15E+03 | 1.14E+03 |




Data identically zero, insufficient, or not available from NFA.

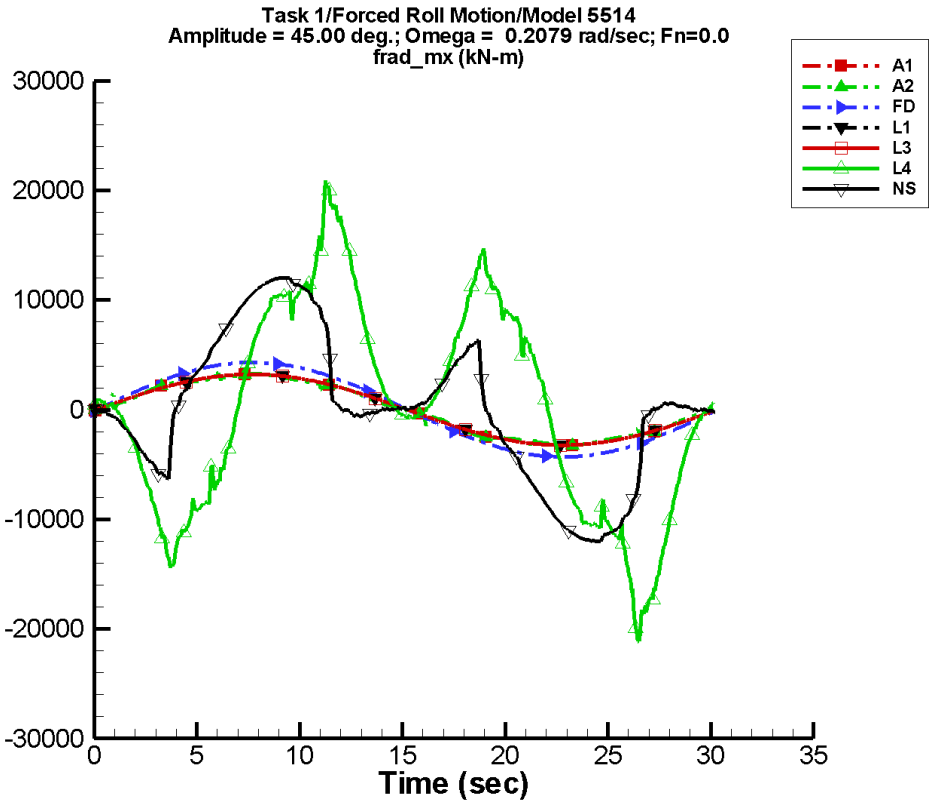
Figure D–483. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–965. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.24 | 2.10E+03 | 0 | 1.32 | 13 |
| A2 | -2.24 | 2.10E+03 | 0 | 1.32 | 13 |
| FD | -3.93E-04 | 2.87E+03 | -2 | 3.27E-04 | 46 |
| L1 | 3.38E-02 | 2.16E+03 | -1 | 0.232 | 163 |
| L3 | 3.39E-02 | 2.16E+03 | -1 | 0.232 | 163 |
| L4 | 92.3 | 3.31E+03 | -55 | 546. | 161 |
| NF | — | — | — | — | — |
| NS | -3.14 | 3.27E+03 | -12 | 2.77 | 75 |

Table D–966. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.23E+03 | 2.23E+03 | -2.16E+03 | 2.17E+03 |
| A2 | -2.23E+03 | 2.23E+03 | -2.16E+03 | 2.17E+03 |
| FD | -2.87E+03 | 2.87E+03 | -2.87E+03 | 2.87E+03 |
| L1 | -2.16E+03 | 2.16E+03 | -2.15E+03 | 2.16E+03 |
| L3 | -2.16E+03 | 2.16E+03 | -2.15E+03 | 2.16E+03 |
| L4 | -5.90E+03 | 5.91E+03 | -5.83E+03 | 5.81E+03 |
| NF | — | — | — | — |
| NS | -5.33E+03 | 5.30E+03 | -5.23E+03 | 5.20E+03 |




Data identically zero, insufficient, or not available from NFA.

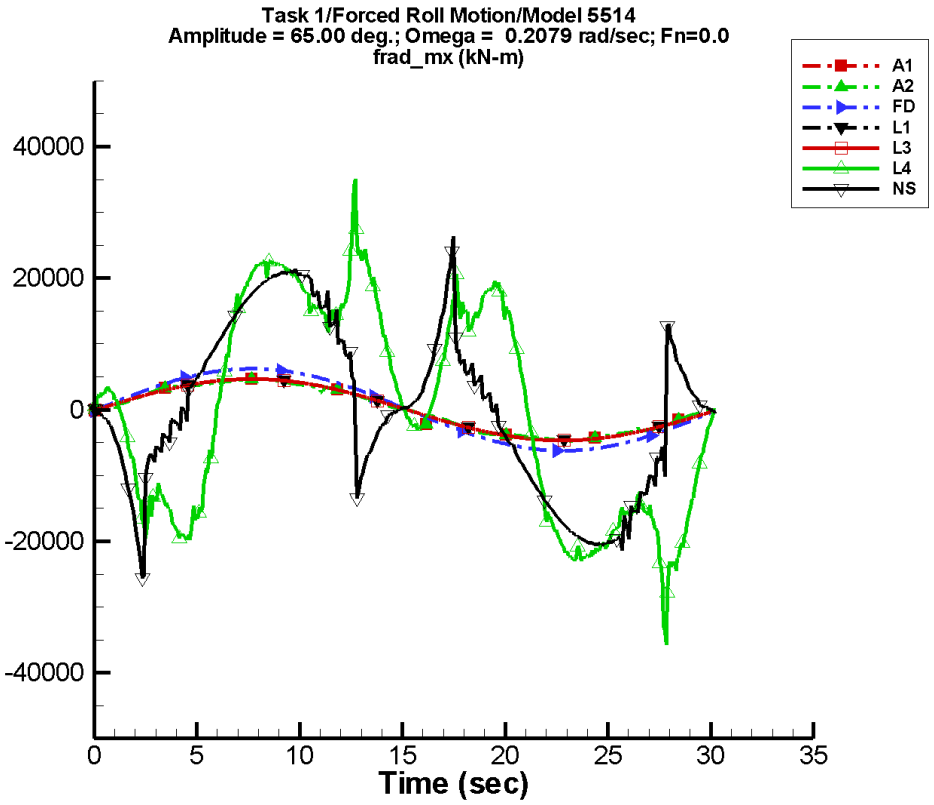
Figure D–484. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–967. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.36 | 3.15E+03 | 0 | 1.98 | 13 |
| A2 | -3.36 | 3.15E+03 | 0 | 1.98 | 13 |
| FD | -6.63E-04 | 4.31E+03 | -2 | 8.41E-04 | 84 |
| L1 | 5.12E-02 | 3.23E+03 | -1 | 0.348 | 163 |
| L3 | 5.11E-02 | 3.23E+03 | -1 | 0.348 | 163 |
| L4 | 357. | 9.95E+03 | -71 | 1.85E+03 | 150 |
| NF | — | — | — | — | — |
| NS | -11.8 | 7.27E+03 | -21 | 8.97 | 72 |

Table D–968. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.34E+03 | 3.35E+03 | -3.24E+03 | 3.25E+03 |
| A2 | -3.34E+03 | 3.35E+03 | -3.24E+03 | 3.25E+03 |
| FD | -4.31E+03 | 4.31E+03 | -4.31E+03 | 4.31E+03 |
| L1 | -3.23E+03 | 3.24E+03 | -3.23E+03 | 3.24E+03 |
| L3 | -3.23E+03 | 3.24E+03 | -3.23E+03 | 3.24E+03 |
| L4 | -2.12E+04 | 2.12E+04 | -1.97E+04 | 1.94E+04 |
| NF | — | — | — | — |
| NS | -1.22E+04 | 1.21E+04 | -1.21E+04 | 1.19E+04 |




Data identically zero, insufficient, or not available from NFA.

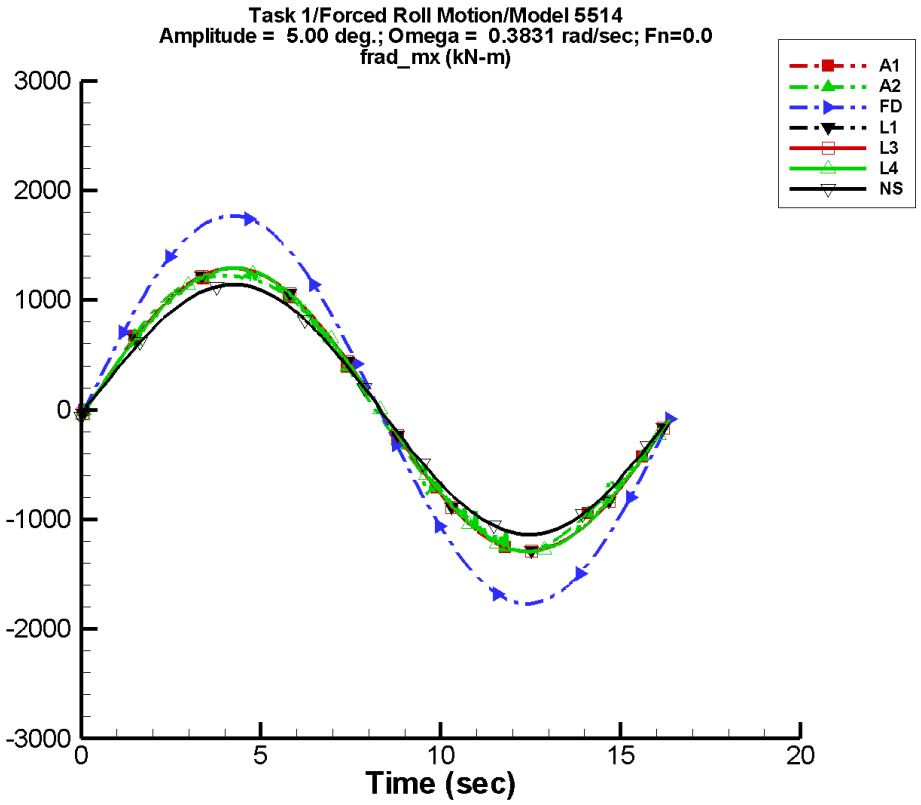
Figure D–485. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–969. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -4.85 | 4.55E+03 | 0 | 2.86 | 13 |
| A2 | -4.85 | 4.55E+03 | 0 | 2.86 | 13 |
| FD | -1.23E-03 | 6.23E+03 | -2 | 7.70E-04 | 66 |
| L1 | 7.56E-02 | 4.67E+03 | -1 | 0.502 | 163 |
| L3 | 7.55E-02 | 4.67E+03 | -1 | 0.502 | 163 |
| L4 | 224. | 1.80E+04 | -58 | 1.80E+03 | 165 |
| NF | — | — | — | — | — |
| NS | -0.894 | 1.32E+04 | -29 | 109. | -118 |

Table D–970. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.82E+03 | 4.83E+03 | -4.68E+03 | 4.69E+03 |
| A2 | -4.82E+03 | 4.83E+03 | -4.68E+03 | 4.69E+03 |
| FD | -6.23E+03 | 6.23E+03 | -6.22E+03 | 6.22E+03 |
| L1 | -4.67E+03 | 4.68E+03 | -4.67E+03 | 4.67E+03 |
| L3 | -4.67E+03 | 4.68E+03 | -4.67E+03 | 4.67E+03 |
| L4 | -3.58E+04 | 3.51E+04 | -2.86E+04 | 2.76E+04 |
| NF | — | — | — | — |
| NS | -2.57E+04 | 2.64E+04 | -2.07E+04 | 2.09E+04 |




Data identically zero, insufficient, or not available from NFA.

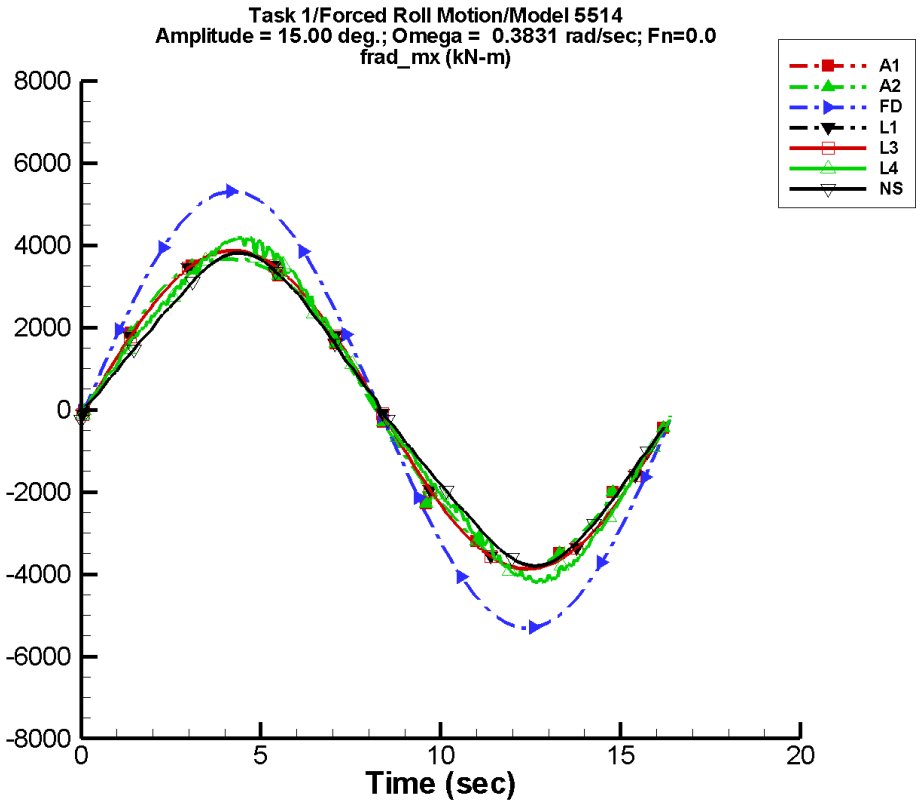
Figure D–486. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–971. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.74 | 1.25E+03 | -1 | 3.57 | -2 |
| A2 | -1.74 | 1.25E+03 | -1 | 3.57 | -2 |
| FD | 4.31E-04 | 1.77E+03 | -2 | 7.99E-05 | -151 |
| L1 | -9.32E-03 | 1.29E+03 | -3 | 0.106 | -43 |
| L3 | -9.36E-03 | 1.29E+03 | -3 | 0.106 | -43 |
| L4 | -0.439 | 1.28E+03 | -3 | 4.33 | -25 |
| NF | — | — | — | — | — |
| NS | 2.27E-02 | 1.14E+03 | -3 | 0.105 | 161 |

Table D–972. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.29E+03 | 1.25E+03 | -1.28E+03 | 1.23E+03 |
| A2 | -1.29E+03 | 1.25E+03 | -1.28E+03 | 1.23E+03 |
| FD | -1.77E+03 | 1.77E+03 | -1.76E+03 | 1.76E+03 |
| L1 | -1.29E+03 | 1.29E+03 | -1.29E+03 | 1.29E+03 |
| L3 | -1.29E+03 | 1.29E+03 | -1.29E+03 | 1.29E+03 |
| L4 | -1.30E+03 | 1.29E+03 | -1.29E+03 | 1.29E+03 |
| NF | — | — | — | — |
| NS | -1.14E+03 | 1.14E+03 | -1.13E+03 | 1.13E+03 |




Data identically zero, insufficient, or not available from NFA.

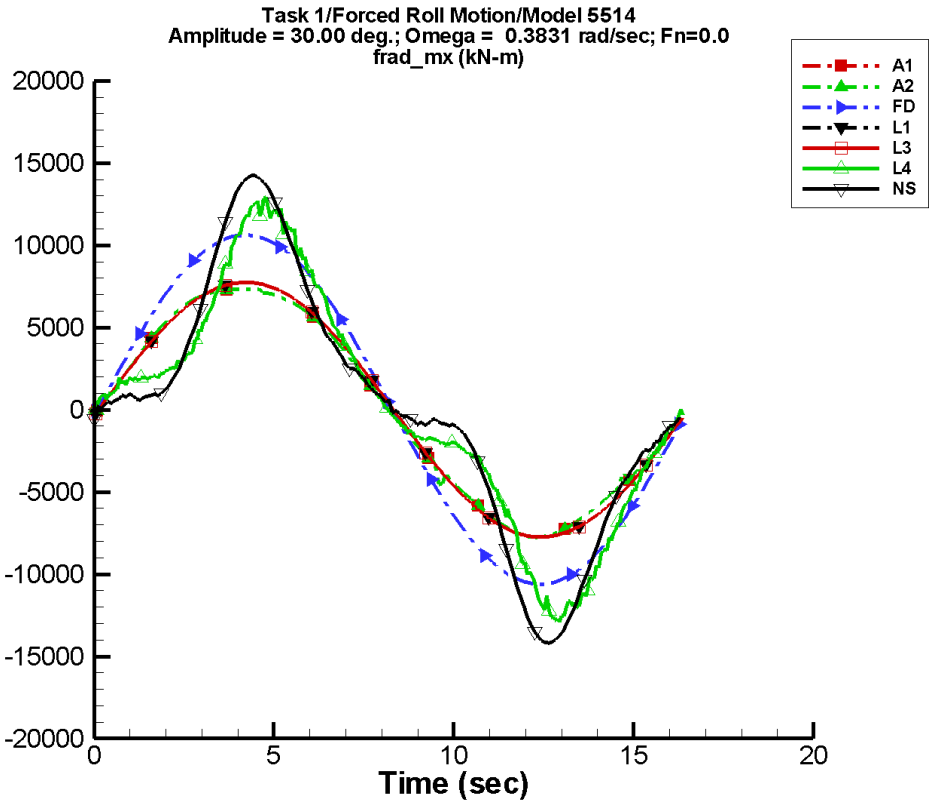
Figure D–487. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–973. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.21 | 3.75E+03 | -1 | 10.7 | -2 |
| A2 | -5.21 | 3.75E+03 | -1 | 10.7 | -2 |
| FD | 1.24E-03 | 5.31E+03 | -2 | 4.10E-04 | 88 |
| L1 | -2.67E-02 | 3.87E+03 | -3 | 0.319 | -43 |
| L3 | -2.67E-02 | 3.87E+03 | -3 | 0.319 | -43 |
| L4 | -5.17 | 3.90E+03 | -5 | 14.8 | 20 |
| NF | — | — | — | — | — |
| NS | 0.332 | 3.56E+03 | -5 | 0.177 | -151 |

Table D–974. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.88E+03 | 3.74E+03 | -3.85E+03 | 3.67E+03 |
| A2 | -3.88E+03 | 3.74E+03 | -3.85E+03 | 3.67E+03 |
| FD | -5.31E+03 | 5.31E+03 | -5.29E+03 | 5.29E+03 |
| L1 | -3.87E+03 | 3.87E+03 | -3.87E+03 | 3.87E+03 |
| L3 | -3.87E+03 | 3.87E+03 | -3.87E+03 | 3.87E+03 |
| L4 | -4.19E+03 | 4.19E+03 | -4.15E+03 | 4.14E+03 |
| NF | — | — | — | — |
| NS | -3.80E+03 | 3.81E+03 | -3.74E+03 | 3.75E+03 |




Data identically zero, insufficient, or not available from NFA.

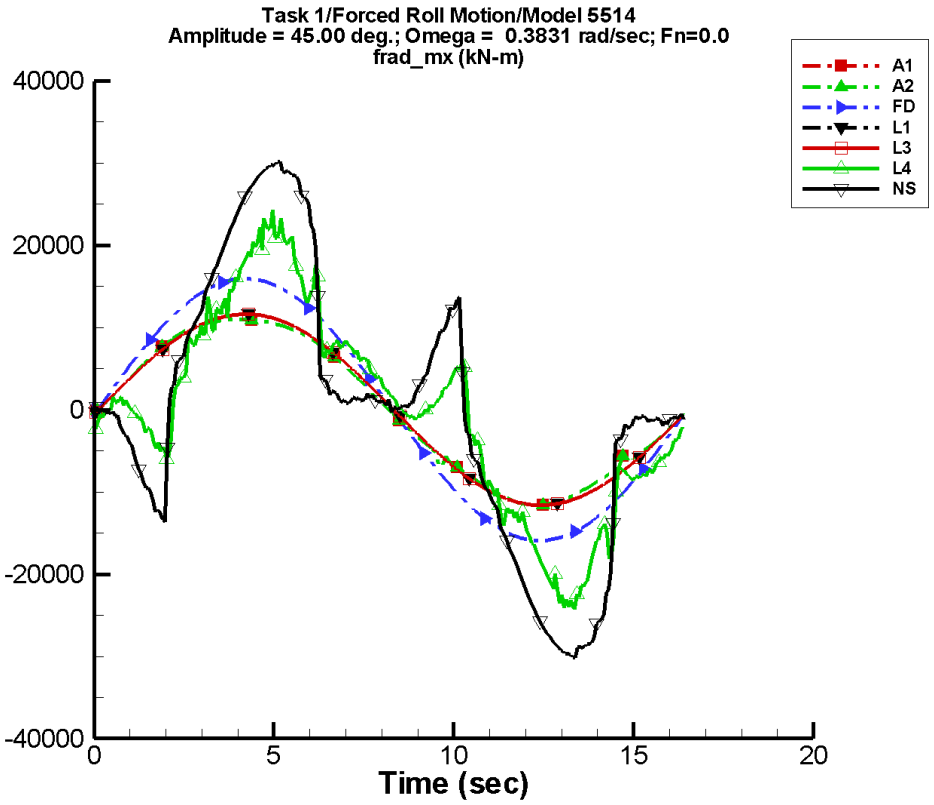
Figure D–488. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–975. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -10.4 | 7.50E+03 | -1 | 21.4 | -2 |
| A2 | -10.4 | 7.50E+03 | -1 | 21.4 | -2 |
| FD | 2.22E-03 | 1.06E+04 | -2 | 9.83E-04 | 98 |
| L1 | -5.09E-02 | 7.74E+03 | -3 | 0.636 | -43 |
| L3 | -5.12E-02 | 7.74E+03 | -3 | 0.636 | -43 |
| L4 | -49.0 | 9.13E+03 | -12 | 133. | 139 |
| NF | — | — | — | — | — |
| NS | 3.32 | 9.66E+03 | -11 | 3.02 | -58 |

Table D–976. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.75E+03 | 7.48E+03 | -7.71E+03 | 7.35E+03 |
| A2 | -7.75E+03 | 7.48E+03 | -7.71E+03 | 7.35E+03 |
| FD | -1.06E+04 | 1.06E+04 | -1.06E+04 | 1.06E+04 |
| L1 | -7.74E+03 | 7.74E+03 | -7.73E+03 | 7.73E+03 |
| L3 | -7.74E+03 | 7.74E+03 | -7.73E+03 | 7.73E+03 |
| L4 | -1.29E+04 | 1.29E+04 | -1.25E+04 | 1.24E+04 |
| NF | — | — | — | — |
| NS | -1.42E+04 | 1.42E+04 | -1.40E+04 | 1.40E+04 |




Data identically zero, insufficient, or not available from NFA.

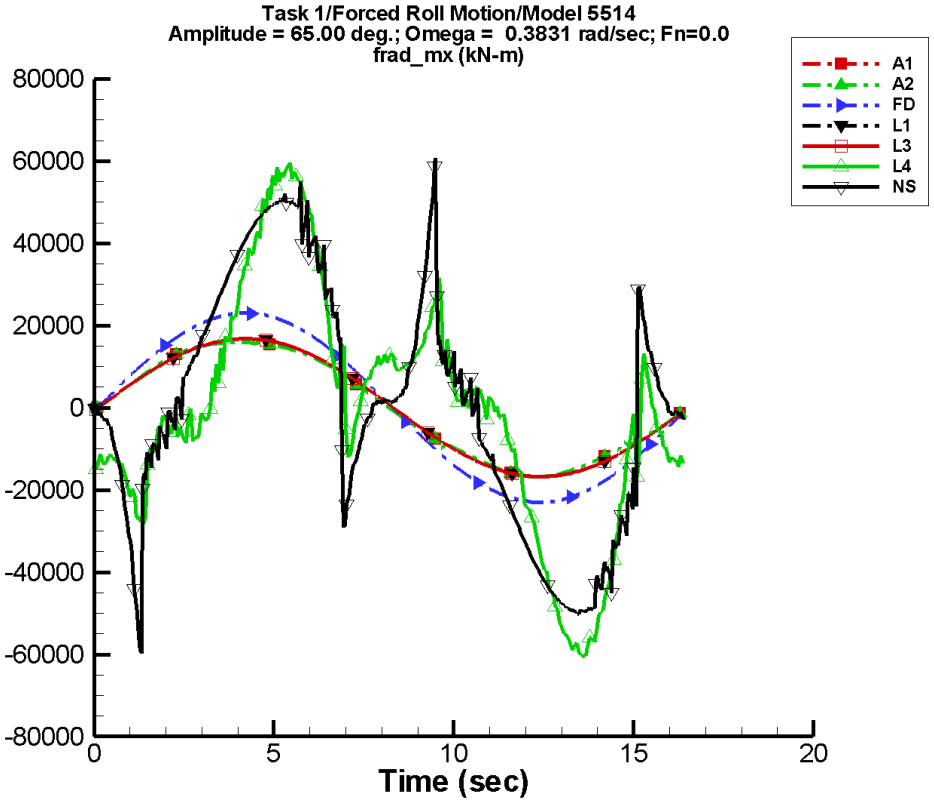
Figure D–489. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–977. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -15.6 | 1.12E+04 | -1 | 32.2 | -2 |
| A2 | -15.6 | 1.12E+04 | -1 | 32.2 | -2 |
| FD | 3.12E-03 | 1.59E+04 | -2 | 1.60E-03 | 67 |
| L1 | -7.34E-02 | 1.16E+04 | -3 | 0.956 | -43 |
| L3 | -7.33E-02 | 1.16E+04 | -3 | 0.956 | -43 |
| L4 | -436. | 1.53E+04 | -23 | 659. | 145 |
| NF | — | — | — | — | — |
| NS | 10.3 | 1.91E+04 | -20 | 9.90 | -45 |

Table D–978. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.16E+04 | 1.12E+04 | -1.16E+04 | 1.10E+04 |
| A2 | -1.16E+04 | 1.12E+04 | -1.16E+04 | 1.10E+04 |
| FD | -1.59E+04 | 1.59E+04 | -1.59E+04 | 1.59E+04 |
| L1 | -1.16E+04 | 1.16E+04 | -1.16E+04 | 1.16E+04 |
| L3 | -1.16E+04 | 1.16E+04 | -1.16E+04 | 1.16E+04 |
| L4 | -2.42E+04 | 2.43E+04 | -2.34E+04 | 2.21E+04 |
| NF | — | — | — | — |
| NS | -3.01E+04 | 3.02E+04 | -2.97E+04 | 2.98E+04 |




Data identically zero, insufficient, or not available from NFA.

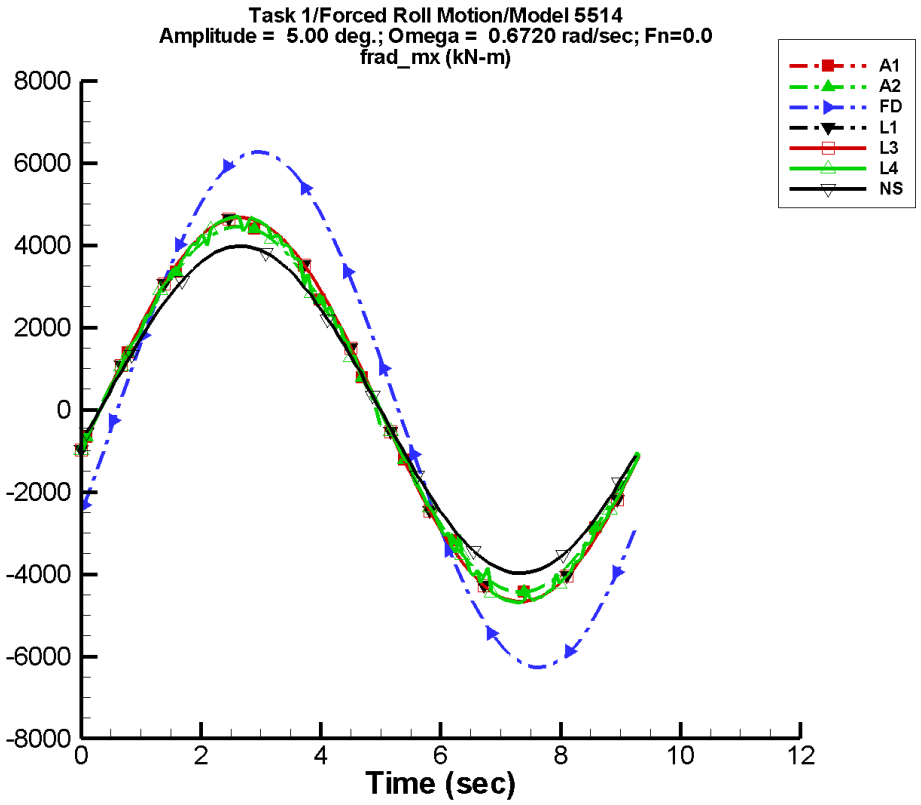
Figure D–490. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–979. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -22.6 | 1.62E+04 | -1 | 46.5 | -2 |
| A2 | -22.6 | 1.62E+04 | -1 | 46.5 | -2 |
| FD | 3.75E-03 | 2.30E+04 | -2 | 1.36E-03 | 179 |
| L1 | -9.77E-02 | 1.68E+04 | -3 | 1.38 | -43 |
| L3 | -9.76E-02 | 1.68E+04 | -3 | 1.38 | -43 |
| L4 | -1.08E+03 | 3.25E+04 | -41 | 1.40E+03 | 168 |
| NF | — | — | — | — | — |
| NS | 52.4 | 3.20E+04 | -30 | 247. | -113 |

Table D–980. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.68E+04 | 1.62E+04 | -1.67E+04 | 1.59E+04 |
| A2 | -1.68E+04 | 1.62E+04 | -1.67E+04 | 1.59E+04 |
| FD | -2.30E+04 | 2.30E+04 | -2.29E+04 | 2.29E+04 |
| L1 | -1.68E+04 | 1.68E+04 | -1.68E+04 | 1.68E+04 |
| L3 | -1.68E+04 | 1.68E+04 | -1.68E+04 | 1.68E+04 |
| L4 | -6.04E+04 | 5.97E+04 | -5.91E+04 | 5.75E+04 |
| NF | — | — | — | — |
| NS | -6.02E+04 | 6.09E+04 | -4.97E+04 | 5.04E+04 |




Data identically zero, insufficient, or not available from NFA.

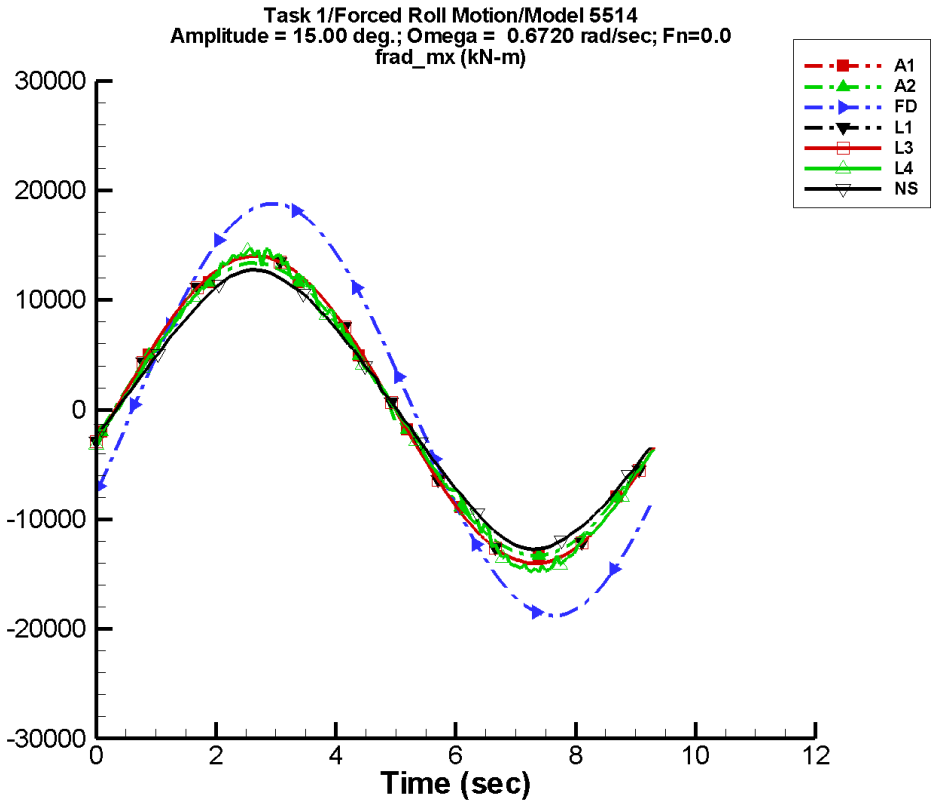
Figure D–491. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–981. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.33 | 4.41E+03 | -11 | 10.4 | -90 |
| A2 | -2.33 | 4.41E+03 | -11 | 10.4 | -90 |
| FD | -1.14E-02 | 6.27E+03 | -24 | 1.37E-02 | -166 |
| L1 | 1.45E-02 | 4.67E+03 | -12 | 0.139 | -118 |
| L3 | 1.45E-02 | 4.67E+03 | -12 | 0.139 | -118 |
| L4 | -9.89 | 4.58E+03 | -12 | 34.7 | -46 |
| NF | — | — | — | — | — |
| NS | -0.850 | 3.97E+03 | -12 | 1.06 | 175 |

Table D–982. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.44E+03 | 4.46E+03 | -4.38E+03 | 4.40E+03 |
| A2 | -4.44E+03 | 4.46E+03 | -4.38E+03 | 4.40E+03 |
| FD | -6.27E+03 | 6.27E+03 | -6.19E+03 | 6.20E+03 |
| L1 | -4.67E+03 | 4.67E+03 | -4.65E+03 | 4.65E+03 |
| L3 | -4.67E+03 | 4.67E+03 | -4.65E+03 | 4.65E+03 |
| L4 | -4.69E+03 | 4.69E+03 | -4.65E+03 | 4.61E+03 |
| NF | — | — | — | — |
| NS | -3.98E+03 | 3.98E+03 | -3.94E+03 | 3.94E+03 |




Data identically zero, insufficient, or not available from NFA.

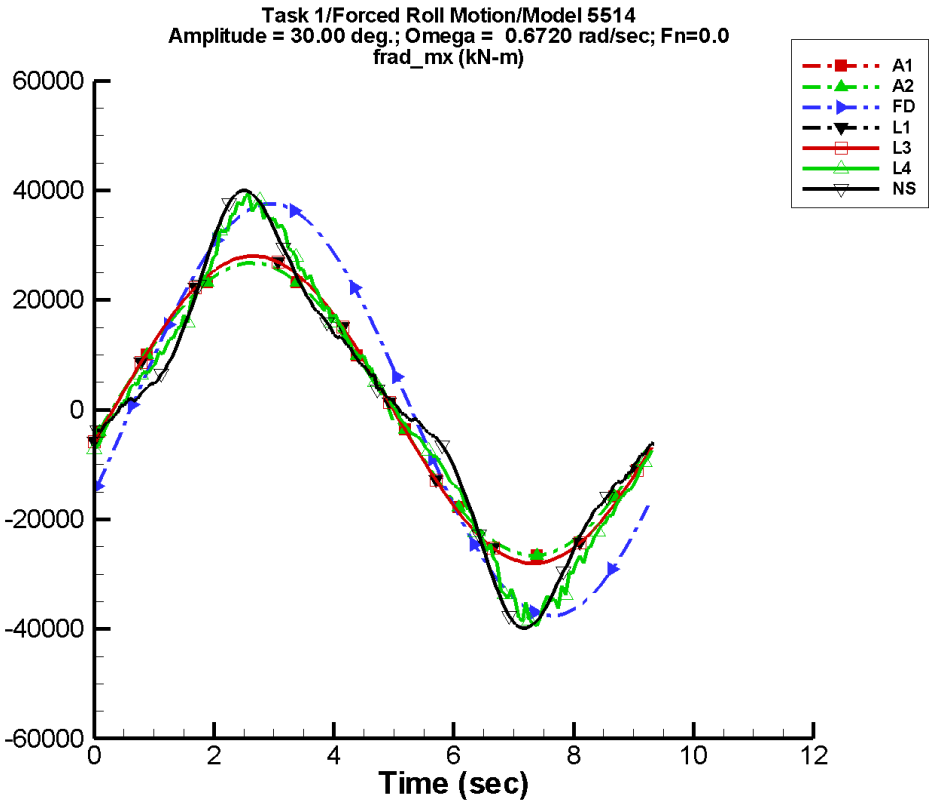
Figure D–492. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–983. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.99 | 1.32E+04 | -11 | 31.2 | -90 |
| A2 | -6.99 | 1.32E+04 | -11 | 31.2 | -90 |
| FD | -3.53E-02 | 1.88E+04 | -24 | 4.03E-02 | -167 |
| L1 | 4.62E-02 | 1.40E+04 | -12 | 0.416 | -118 |
| L3 | 4.60E-02 | 1.40E+04 | -12 | 0.416 | -118 |
| L4 | -121. | 1.38E+04 | -13 | 113. | -29 |
| NF | — | — | — | — | — |
| NS | -1.48 | 1.23E+04 | -13 | 3.08 | -173 |

Table D–984. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.33E+04 | 1.34E+04 | -1.31E+04 | 1.32E+04 |
| A2 | -1.33E+04 | 1.34E+04 | -1.31E+04 | 1.32E+04 |
| FD | -1.88E+04 | 1.88E+04 | -1.86E+04 | 1.86E+04 |
| L1 | -1.40E+04 | 1.40E+04 | -1.40E+04 | 1.40E+04 |
| L3 | -1.40E+04 | 1.40E+04 | -1.40E+04 | 1.40E+04 |
| L4 | -1.48E+04 | 1.48E+04 | -1.45E+04 | 1.43E+04 |
| NF | — | — | — | — |
| NS | -1.27E+04 | 1.28E+04 | -1.26E+04 | 1.26E+04 |




Data identically zero, insufficient, or not available from NFA.

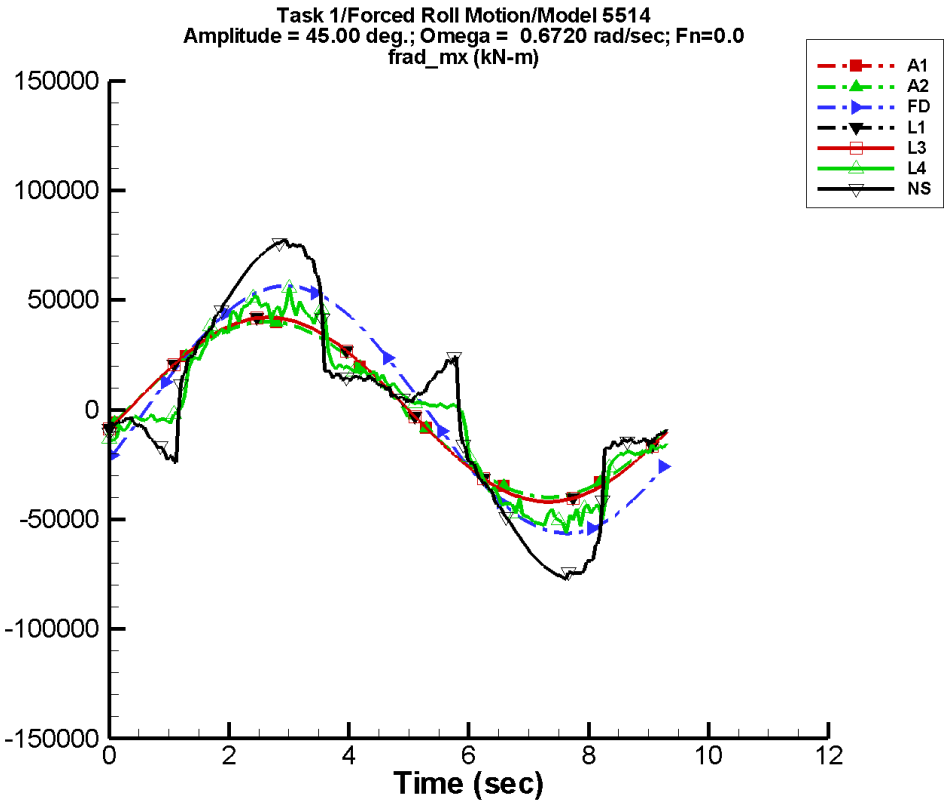
Figure D–493. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–985. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -14.0 | 2.65E+04 | -11 | 62.5 | -90 |
| A2 | -14.0 | 2.65E+04 | -11 | 62.5 | -90 |
| FD | -6.82E-02 | 3.76E+04 | -24 | 8.18E-02 | -169 |
| L1 | 0.102 | 2.80E+04 | -12 | 0.825 | -119 |
| L3 | 0.102 | 2.80E+04 | -12 | 0.825 | -119 |
| L4 | -477. | 3.14E+04 | -16 | 288. | -158 |
| NF | — | — | — | — | — |
| NS | 8.36 | 3.06E+04 | -15 | 14.6 | -109 |

Table D–986. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.66E+04 | 2.67E+04 | -2.63E+04 | 2.64E+04 |
| A2 | -2.66E+04 | 2.67E+04 | -2.63E+04 | 2.64E+04 |
| FD | -3.76E+04 | 3.76E+04 | -3.72E+04 | 3.72E+04 |
| L1 | -2.80E+04 | 2.80E+04 | -2.79E+04 | 2.79E+04 |
| L3 | -2.80E+04 | 2.80E+04 | -2.79E+04 | 2.79E+04 |
| L4 | -3.94E+04 | 3.93E+04 | -3.74E+04 | 3.75E+04 |
| NF | — | — | — | — |
| NS | -3.99E+04 | 4.00E+04 | -3.93E+04 | 3.94E+04 |




Data identically zero, insufficient, or not available from NFA.

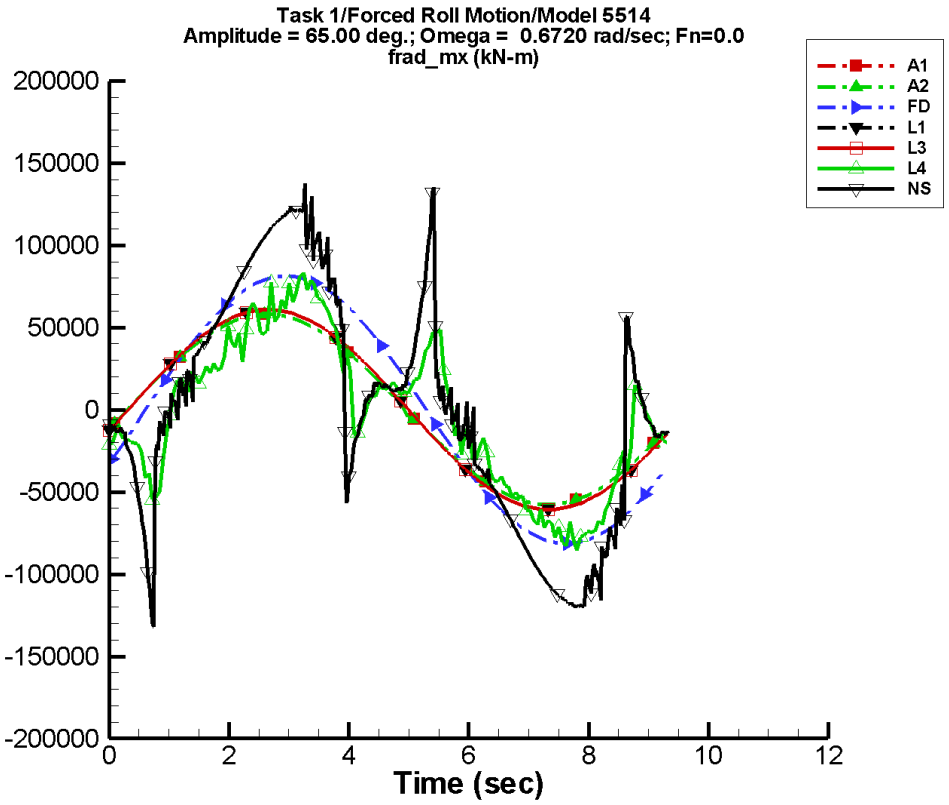
Figure D–494. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–987. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -21.0 | 3.97E+04 | -11 | 93.7 | -90 |
| A2 | -21.0 | 3.97E+04 | -11 | 93.7 | -90 |
| FD | -0.104 | 5.64E+04 | -24 | 0.124 | -167 |
| L1 | 0.157 | 4.20E+04 | -12 | 1.23 | -119 |
| L3 | 0.158 | 4.20E+04 | -12 | 1.23 | -119 |
| L4 | -1.66E+03 | 4.31E+04 | -22 | 1.24E+03 | 174 |
| NF | — | — | — | — | — |
| NS | 41.6 | 5.50E+04 | -20 | 40.4 | -113 |

Table D–988. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.99E+04 | 4.01E+04 | -3.94E+04 | 3.96E+04 |
| A2 | -3.99E+04 | 4.01E+04 | -3.94E+04 | 3.96E+04 |
| FD | -5.64E+04 | 5.64E+04 | -5.57E+04 | 5.58E+04 |
| L1 | -4.20E+04 | 4.21E+04 | -4.19E+04 | 4.19E+04 |
| L3 | -4.20E+04 | 4.21E+04 | -4.19E+04 | 4.19E+04 |
| L4 | -5.61E+04 | 5.57E+04 | -5.03E+04 | 4.80E+04 |
| NF | — | — | — | — |
| NS | -7.71E+04 | 7.74E+04 | -7.58E+04 | 7.61E+04 |




Data identically zero, insufficient, or not available from NFA.

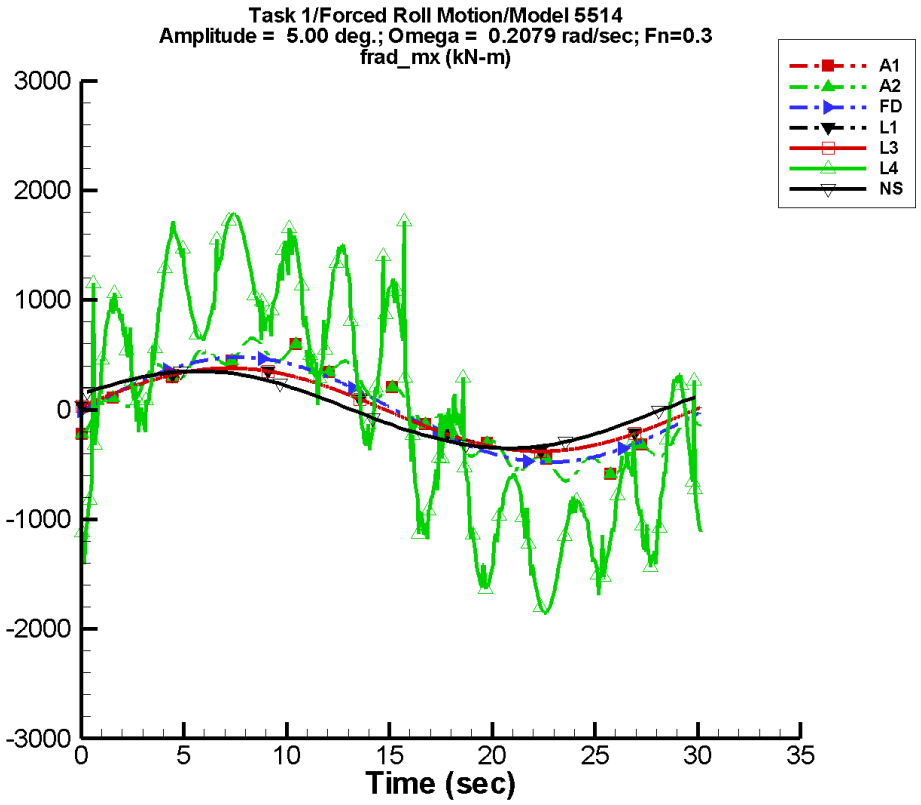
Figure D–495. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–989. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -30.3 | 5.74E+04 | -11 | 135. | -90 |
| A2 | -30.3 | 5.74E+04 | -11 | 135. | -90 |
| FD | -0.148 | 8.15E+04 | -24 | 0.180 | -167 |
| L1 | 0.235 | 6.07E+04 | -12 | 1.75 | -119 |
| L3 | 0.235 | 6.07E+04 | -12 | 1.75 | -119 |
| L4 | -3.46E+03 | 5.61E+04 | -32 | 2.67E+03 | 156 |
| NF | — | — | — | — | — |
| NS | 333. | 8.28E+04 | -28 | 703. | -118 |

Table D–990. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.76E+04 | 5.79E+04 | -5.70E+04 | 5.72E+04 |
| A2 | -5.76E+04 | 5.79E+04 | -5.70E+04 | 5.72E+04 |
| FD | -8.15E+04 | 8.15E+04 | -8.05E+04 | 8.05E+04 |
| L1 | -6.07E+04 | 6.07E+04 | -6.05E+04 | 6.05E+04 |
| L3 | -6.07E+04 | 6.07E+04 | -6.05E+04 | 6.05E+04 |
| L4 | -8.54E+04 | 8.33E+04 | -7.77E+04 | 7.51E+04 |
| NF | — | — | — | — |
| NS | -1.32E+05 | 1.37E+05 | -1.20E+05 | 1.22E+05 |




Data identically zero, insufficient, or not available from NFA.

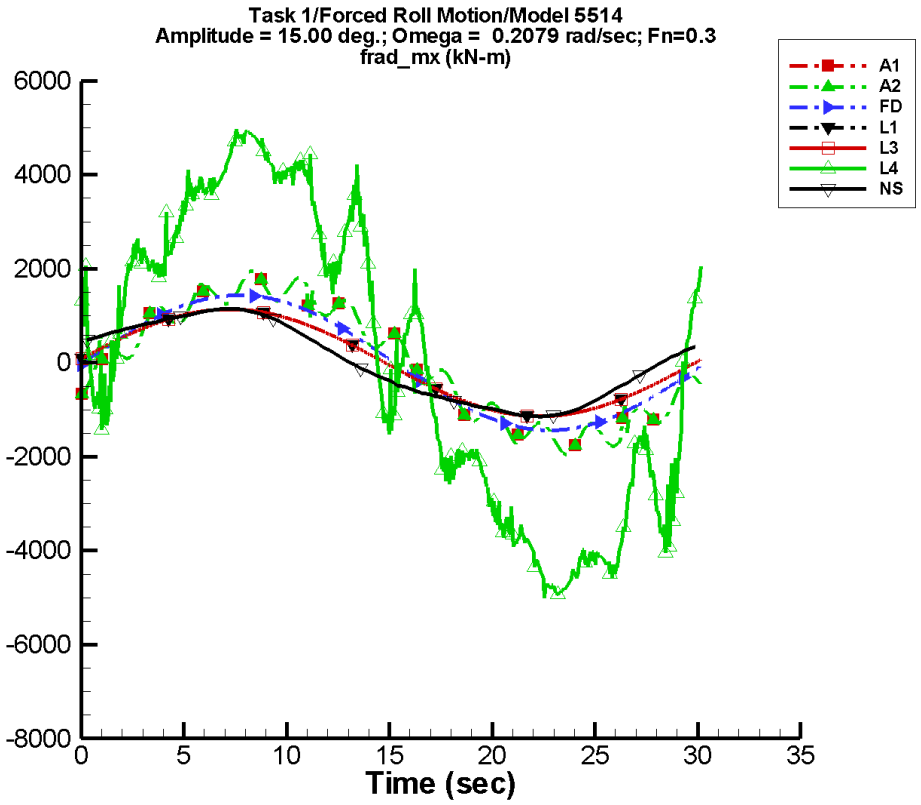
Figure D–496. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–991. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.295 | 543. | -12 | 0.951 | -17 |
| A2 | -0.295 | 543. | -12 | 0.951 | -17 |
| FD | -5.32E-05 | 479. | -2 | 6.57E-05 | 88 |
| L1 | 0.170 | 379. | 4 | 8.21E-03 | -116 |
| L3 | 0.142 | 379. | 4 | 2.65E-03 | -156 |
| L4 | 10.5 | 1.29E+03 | -8 | 27.3 | 36 |
| NF | — | — | — | — | — |
| NS | -9.38E-03 | 352. | 23 | 1.14E-02 | 16 |

Table D–992. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -651. | 652. | -632. | 633. |
| A2 | -651. | 652. | -632. | 633. |
| FD | -479. | 479. | -479. | 479. |
| L1 | -379. | 380. | -379. | 380. |
| L3 | -379. | 380. | -379. | 379. |
| L4 | -1.85E+03 | 1.87E+03 | -1.83E+03 | 1.85E+03 |
| NF | — | — | — | — |
| NS | -352. | 352. | -348. | 348. |




Data identically zero, insufficient, or not available from NFA.

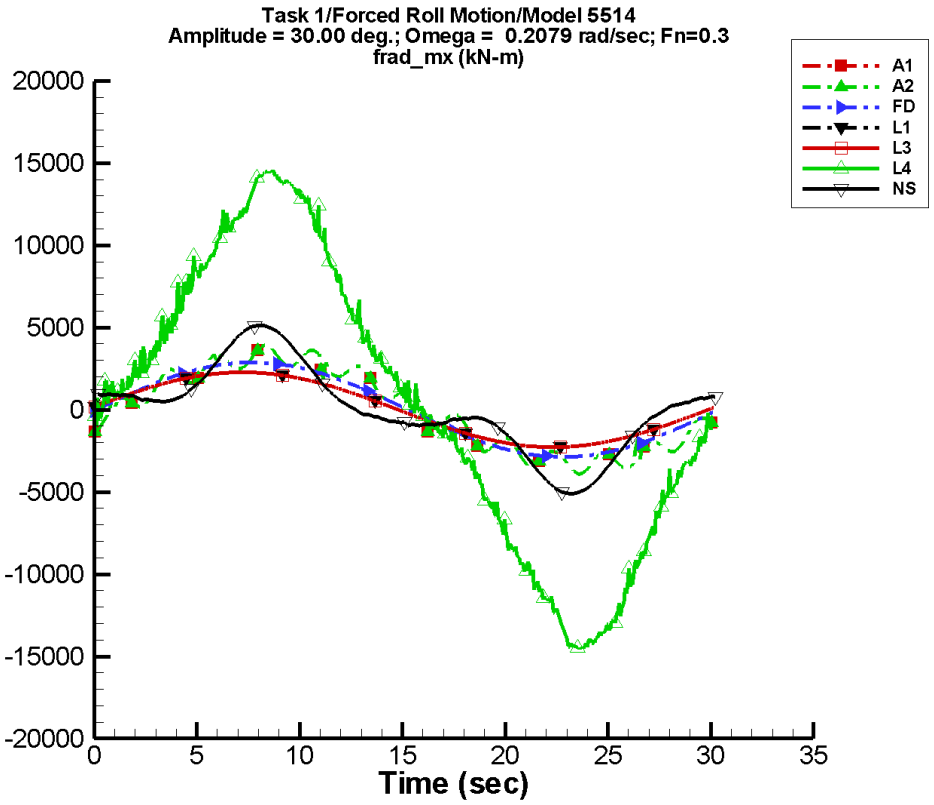
Figure D–497. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–993. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.885 | 1.63E+03 | -12 | 2.85 | -17 |
| A2 | -0.885 | 1.63E+03 | -12 | 2.85 | -17 |
| FD | -7.87E-05 | 1.44E+03 | -2 | 1.58E-04 | 55 |
| L1 | 0.167 | 1.14E+03 | 4 | 7.01E-03 | -125 |
| L3 | 0.138 | 1.14E+03 | 4 | 1.25E-03 | 153 |
| L4 | 22.8 | 4.28E+03 | -9 | 6.15 | -51 |
| NF | — | — | — | — | — |
| NS | -0.261 | 1.10E+03 | 19 | 0.231 | 57 |

Table D–994. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.95E+03 | 1.96E+03 | -1.90E+03 | 1.90E+03 |
| A2 | -1.95E+03 | 1.96E+03 | -1.90E+03 | 1.90E+03 |
| FD | -1.44E+03 | 1.44E+03 | -1.44E+03 | 1.44E+03 |
| L1 | -1.14E+03 | 1.14E+03 | -1.14E+03 | 1.14E+03 |
| L3 | -1.14E+03 | 1.14E+03 | -1.14E+03 | 1.14E+03 |
| L4 | -5.01E+03 | 4.97E+03 | -4.88E+03 | 4.87E+03 |
| NF | — | — | — | — |
| NS | -1.15E+03 | 1.15E+03 | -1.13E+03 | 1.13E+03 |




Data identically zero, insufficient, or not available from NFA.

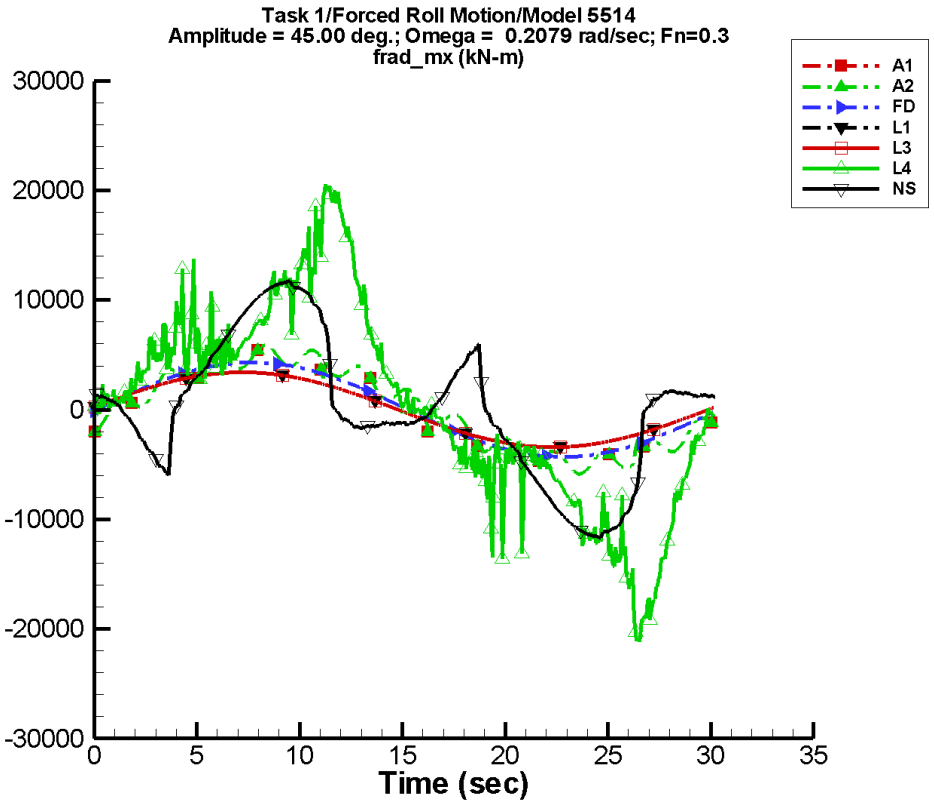
Figure D–498. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–995. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.77 | 3.26E+03 | -12 | 5.70 | -17 |
| A2 | -1.77 | 3.26E+03 | -12 | 5.70 | -17 |
| FD | -3.93E-04 | 2.87E+03 | -2 | 3.27E-04 | 46 |
| L1 | 0.166 | 2.28E+03 | 4 | 2.22E-03 | -158 |
| L3 | 0.139 | 2.28E+03 | 4 | 6.63E-03 | 68 |
| L4 | 105. | 1.20E+04 | -10 | 224. | -124 |
| NF | — | — | — | — | — |
| NS | -3.10 | 3.14E+03 | 3 | 2.86 | 67 |

Table D–996. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.91E+03 | 3.91E+03 | -3.79E+03 | 3.80E+03 |
| A2 | -3.91E+03 | 3.91E+03 | -3.79E+03 | 3.80E+03 |
| FD | -2.87E+03 | 2.87E+03 | -2.87E+03 | 2.87E+03 |
| L1 | -2.28E+03 | 2.28E+03 | -2.28E+03 | 2.28E+03 |
| L3 | -2.28E+03 | 2.28E+03 | -2.28E+03 | 2.28E+03 |
| L4 | -1.46E+04 | 1.46E+04 | -1.45E+04 | 1.45E+04 |
| NF | — | — | — | — |
| NS | -5.16E+03 | 5.13E+03 | -5.05E+03 | 5.03E+03 |




Data identically zero, insufficient, or not available from NFA.

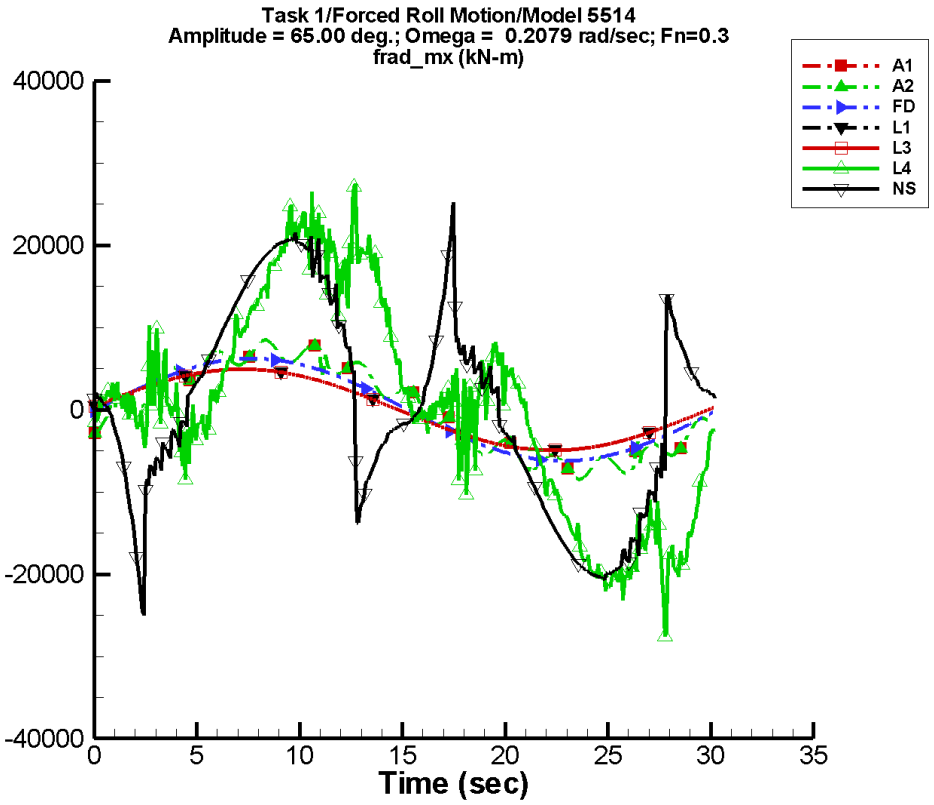
Figure D–499. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–997. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.66 | 4.89E+03 | -12 | 8.55 | -17 |
| A2 | -2.66 | 4.89E+03 | -12 | 8.55 | -17 |
| FD | -6.63E-04 | 4.31E+03 | -2 | 8.41E-04 | 84 |
| L1 | 0.162 | 3.41E+03 | 4 | 9.78E-03 | -124 |
| L3 | 0.135 | 3.41E+03 | 4 | 1.13E-03 | -137 |
| L4 | 573. | 1.19E+04 | -23 | 1.16E+03 | 108 |
| NF | — | — | — | — | — |
| NS | -11.1 | 6.51E+03 | -14 | 8.86 | 59 |

Table D–998. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.86E+03 | 5.87E+03 | -5.69E+03 | 5.70E+03 |
| A2 | -5.86E+03 | 5.87E+03 | -5.69E+03 | 5.70E+03 |
| FD | -4.31E+03 | 4.31E+03 | -4.31E+03 | 4.31E+03 |
| L1 | -3.41E+03 | 3.42E+03 | -3.41E+03 | 3.41E+03 |
| L3 | -3.41E+03 | 3.41E+03 | -3.41E+03 | 3.41E+03 |
| L4 | -2.12E+04 | 2.12E+04 | -2.00E+04 | 1.99E+04 |
| NF | — | — | — | — |
| NS | -1.18E+04 | 1.17E+04 | -1.16E+04 | 1.15E+04 |




Data identically zero, insufficient, or not available from NFA.

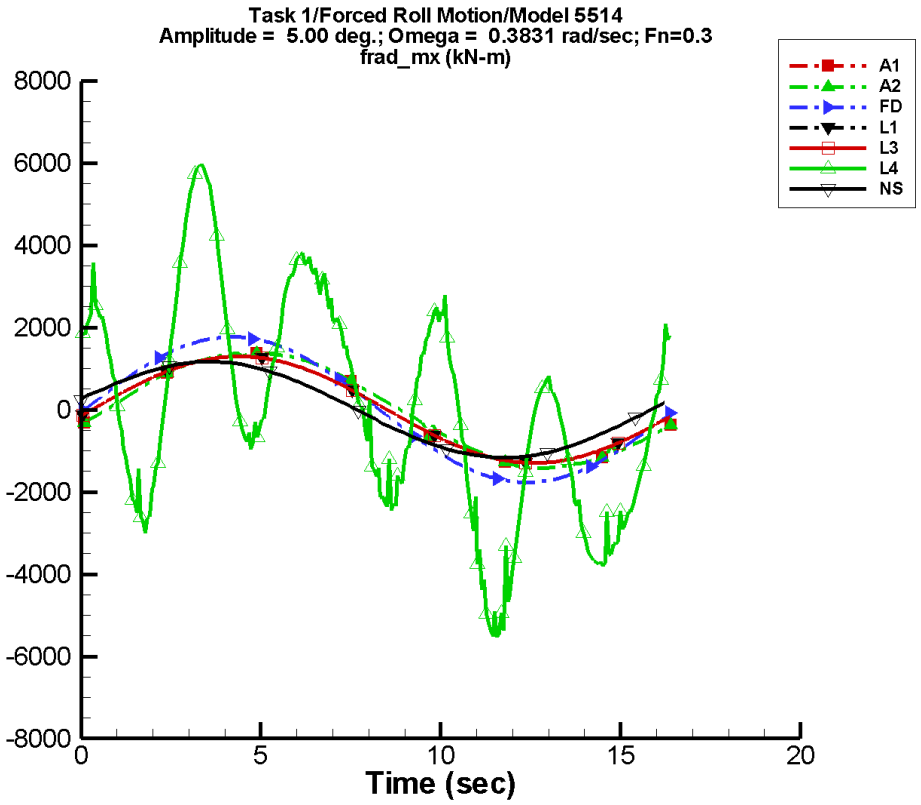
Figure D–500. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–999. Coefficients of the Fourier fit $a_0+a_1\sin(\omega t+\Phi_1)+a_2\sin(2\omega t+\Phi_2)+\cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.84 | 7.06E+03 | -12 | 12.4 | -17 |
| A2 | -3.84 | 7.06E+03 | -12 | 12.4 | -17 |
| FD | -1.23E-03 | 6.23E+03 | -2 | 7.70E-04 | 66 |
| L1 | 0.167 | 4.93E+03 | 4 | 1.01E-02 | -116 |
| L3 | 0.139 | 4.93E+03 | 4 | 3.14E-03 | -54 |
| L4 | 935. | 1.61E+04 | -40 | 1.61E+03 | 127 |
| NF | — | — | — | — | — |
| NS | -11.4 | 1.19E+04 | -29 | 94.6 | -87 |

Table D–1000. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.46E+03 | 8.48E+03 | -8.22E+03 | 8.23E+03 |
| A2 | -8.46E+03 | 8.48E+03 | -8.22E+03 | 8.23E+03 |
| FD | -6.23E+03 | 6.23E+03 | -6.22E+03 | 6.22E+03 |
| L1 | -4.93E+03 | 4.93E+03 | -4.93E+03 | 4.93E+03 |
| L3 | -4.93E+03 | 4.93E+03 | -4.93E+03 | 4.93E+03 |
| L4 | -2.76E+04 | 2.75E+04 | -2.15E+04 | 2.23E+04 |
| NF | — | — | — | — |
| NS | -2.50E+04 | 2.53E+04 | -2.07E+04 | 2.07E+04 |




Data identically zero, insufficient, or not available from NFA.

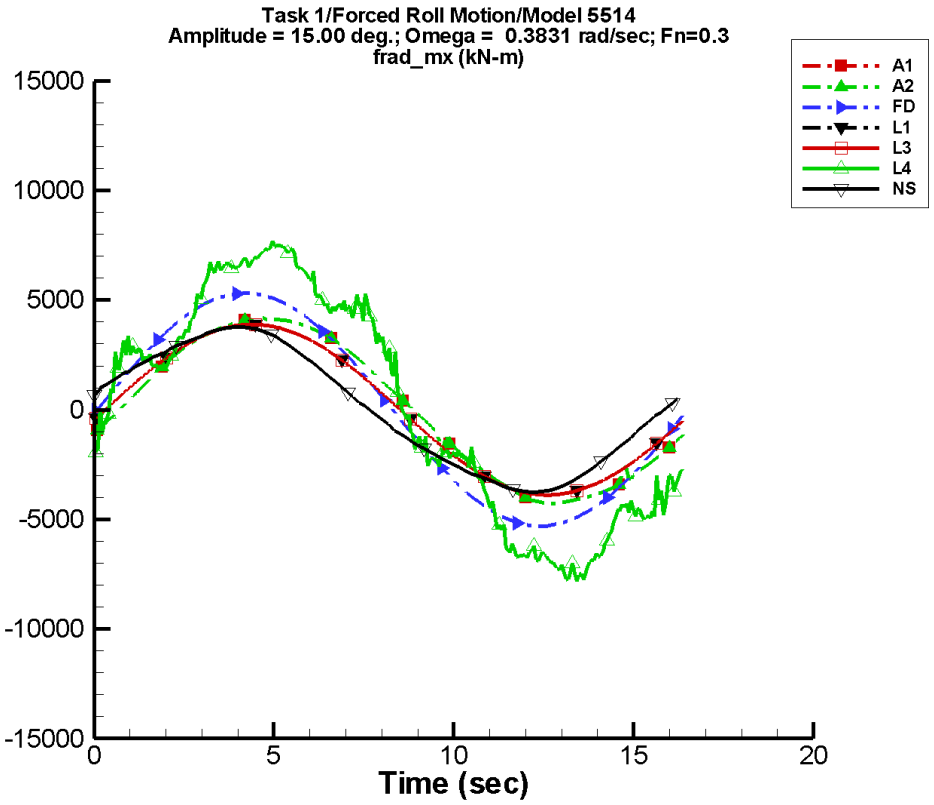
Figure D–501. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1001. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.12 | 1.40E+03 | -15 | 4.22 | 51 |
| A2 | -1.12 | 1.40E+03 | -15 | 4.22 | 51 |
| FD | 4.31E-04 | 1.77E+03 | -2 | 7.99E-05 | -151 |
| L1 | 0.175 | 1.30E+03 | -7 | 1.82E-02 | 133 |
| L3 | 0.139 | 1.30E+03 | -7 | 4.28E-03 | 93 |
| L4 | -12.7 | 2.12E+03 | -14 | 261. | 147 |
| NF | — | — | — | — | — |
| NS | 9.90E-03 | 1.16E+03 | 12 | 0.102 | -175 |

Table D–1002. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.42E+03 | 1.39E+03 | -1.42E+03 | 1.37E+03 |
| A2 | -1.42E+03 | 1.39E+03 | -1.42E+03 | 1.37E+03 |
| FD | -1.77E+03 | 1.77E+03 | -1.76E+03 | 1.76E+03 |
| L1 | -1.30E+03 | 1.30E+03 | -1.29E+03 | 1.29E+03 |
| L3 | -1.30E+03 | 1.30E+03 | -1.29E+03 | 1.29E+03 |
| L4 | -5.52E+03 | 5.98E+03 | -5.20E+03 | 5.78E+03 |
| NF | — | — | — | — |
| NS | -1.17E+03 | 1.17E+03 | -1.15E+03 | 1.16E+03 |




Data identically zero, insufficient, or not available from NFA.

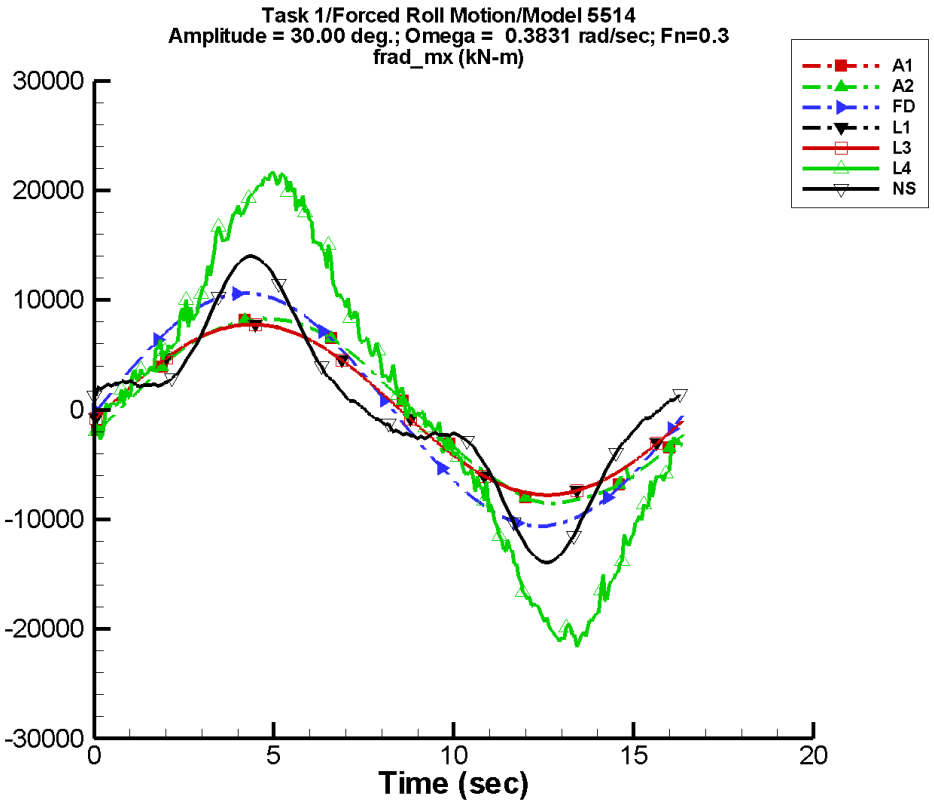
Figure D–502. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1003. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.37 | 4.19E+03 | -15 | 12.7 | 51 |
| A2 | -3.37 | 4.19E+03 | -15 | 12.7 | 51 |
| FD | 1.24E-03 | 5.31E+03 | -2 | 4.10E-04 | 88 |
| L1 | 0.177 | 3.89E+03 | -7 | 1.07E-02 | 129 |
| L3 | 0.140 | 3.89E+03 | -7 | 2.93E-03 | 3 |
| L4 | 121. | 6.91E+03 | -15 | 230. | 64 |
| NF | — | — | — | — | — |
| NS | 0.440 | 3.60E+03 | 10 | 0.380 | -123 |

Table D–1004. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.27E+03 | 4.18E+03 | -4.25E+03 | 4.10E+03 |
| A2 | -4.27E+03 | 4.18E+03 | -4.25E+03 | 4.10E+03 |
| FD | -5.31E+03 | 5.31E+03 | -5.29E+03 | 5.29E+03 |
| L1 | -3.89E+03 | 3.89E+03 | -3.88E+03 | 3.88E+03 |
| L3 | -3.89E+03 | 3.89E+03 | -3.88E+03 | 3.88E+03 |
| L4 | -7.84E+03 | 7.70E+03 | -7.51E+03 | 7.47E+03 |
| NF | — | — | — | — |
| NS | -3.76E+03 | 3.77E+03 | -3.70E+03 | 3.71E+03 |




Data identically zero, insufficient, or not available from NFA.

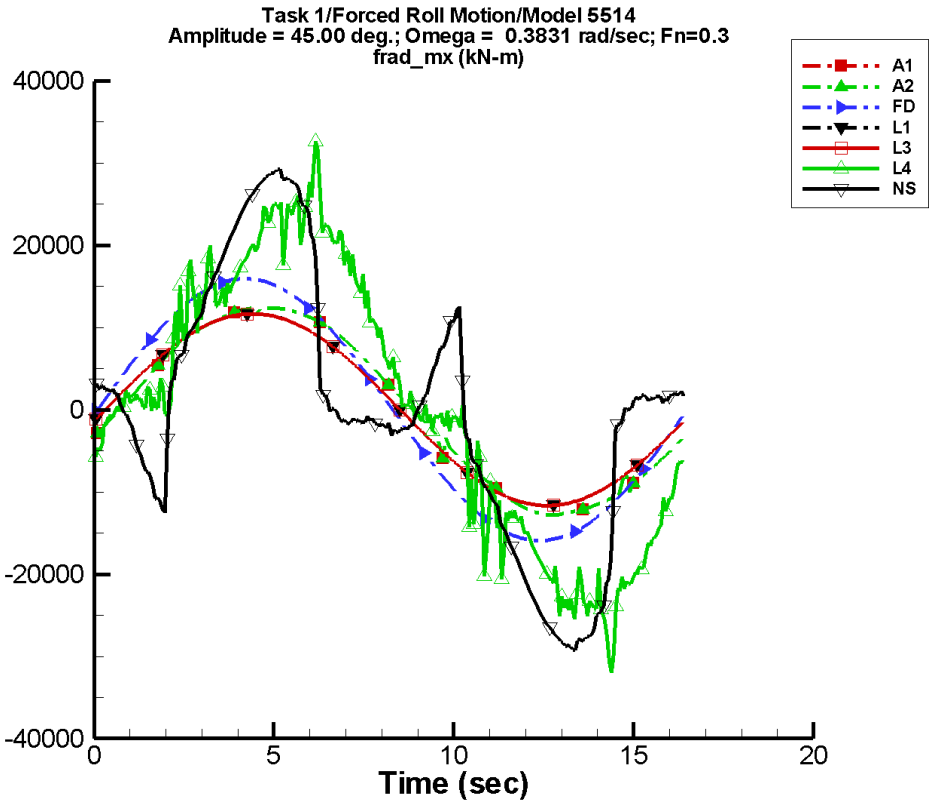
Figure D–503. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1005. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -6.73 | 8.38E+03 | -15 | 25.3 | 51 |
| A2 | -6.73 | 8.38E+03 | -15 | 25.3 | 51 |
| FD | 2.22E-03 | 1.06E+04 | -2 | 9.83E-04 | 98 |
| L1 | 0.185 | 7.77E+03 | -7 | 1.42E-02 | 132 |
| L3 | 0.147 | 7.77E+03 | -7 | 5.17E-03 | 87 |
| L4 | 229. | 1.74E+04 | -17 | 162. | 84 |
| NF | — | — | — | — | — |
| NS | 4.79 | 9.42E+03 | 0 | 4.33 | -73 |

Table D–1006. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.54E+03 | 8.36E+03 | -8.49E+03 | 8.21E+03 |
| A2 | -8.54E+03 | 8.36E+03 | -8.49E+03 | 8.21E+03 |
| FD | -1.06E+04 | 1.06E+04 | -1.06E+04 | 1.06E+04 |
| L1 | -7.77E+03 | 7.77E+03 | -7.76E+03 | 7.76E+03 |
| L3 | -7.77E+03 | 7.77E+03 | -7.76E+03 | 7.76E+03 |
| L4 | -2.16E+04 | 2.18E+04 | -2.06E+04 | 2.12E+04 |
| NF | — | — | — | — |
| NS | -1.39E+04 | 1.40E+04 | -1.37E+04 | 1.37E+04 |




Data identically zero, insufficient, or not available from NFA.

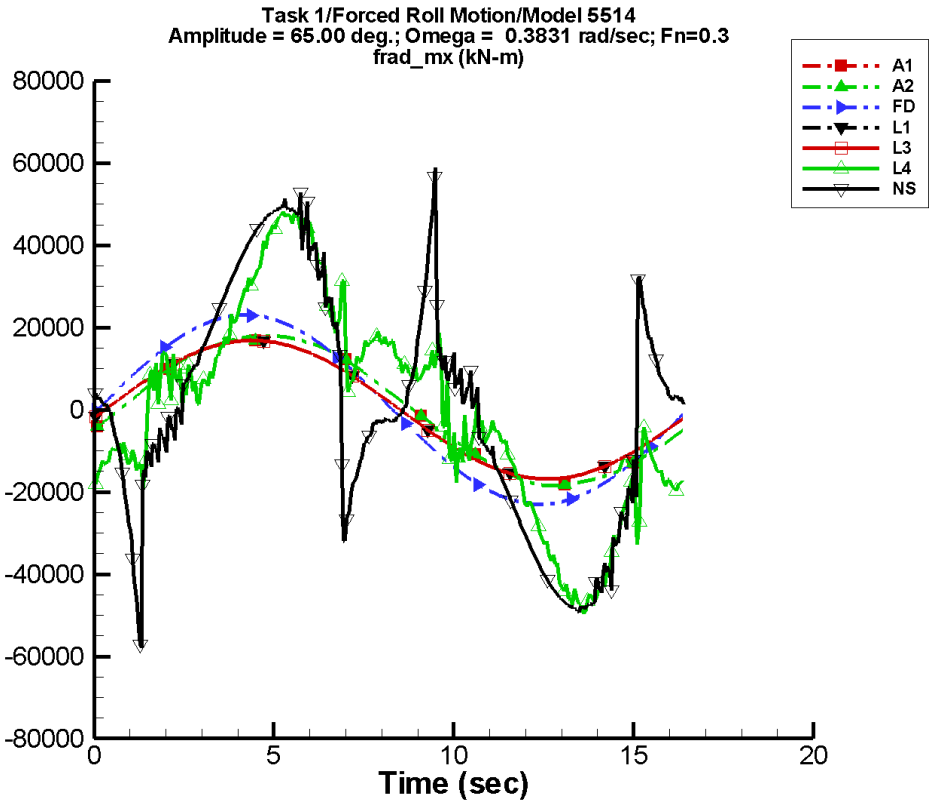
Figure D–504. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1007. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -10.1 | 1.26E+04 | -15 | 38.0 | 51 |
| A2 | -10.1 | 1.26E+04 | -15 | 38.0 | 51 |
| FD | 3.12E-03 | 1.59E+04 | -2 | 1.60E-03 | 67 |
| L1 | 0.188 | 1.17E+04 | -7 | 1.94E-02 | 107 |
| L3 | 0.147 | 1.17E+04 | -7 | 1.57E-02 | 85 |
| L4 | 210. | 2.20E+04 | -26 | 371. | 116 |
| NF | — | — | — | — | — |
| NS | 20.7 | 1.78E+04 | -13 | 18.2 | -71 |

Table D–1008. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.28E+04 | 1.25E+04 | -1.27E+04 | 1.23E+04 |
| A2 | -1.28E+04 | 1.25E+04 | -1.27E+04 | 1.23E+04 |
| FD | -1.59E+04 | 1.59E+04 | -1.59E+04 | 1.59E+04 |
| L1 | -1.17E+04 | 1.17E+04 | -1.16E+04 | 1.16E+04 |
| L3 | -1.17E+04 | 1.17E+04 | -1.16E+04 | 1.16E+04 |
| L4 | -3.20E+04 | 3.26E+04 | -2.69E+04 | 2.73E+04 |
| NF | — | — | — | — |
| NS | -2.92E+04 | 2.93E+04 | -2.87E+04 | 2.88E+04 |




Data identically zero, insufficient, or not available from NFA.

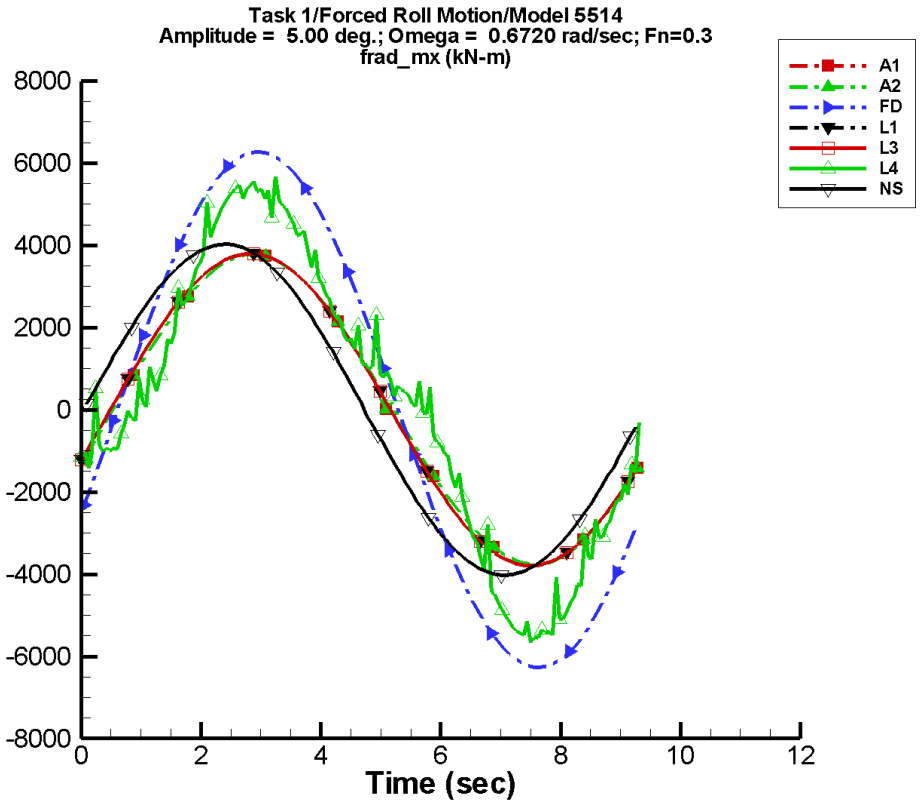
Figure D–505. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1009. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -14.6 | 1.82E+04 | -15 | 54.9 | 51 |
| A2 | -14.6 | 1.82E+04 | -15 | 54.9 | 51 |
| FD | 3.75E-03 | 2.30E+04 | -2 | 1.36E-03 | 179 |
| L1 | 0.193 | 1.68E+04 | -7 | 2.30E-02 | 101 |
| L3 | 0.155 | 1.68E+04 | -7 | 2.50E-02 | 87 |
| L4 | 0.246 | 3.30E+04 | -34 | 186. | -156 |
| NF | — | — | — | — | — |
| NS | 95.7 | 2.92E+04 | -27 | 294. | -101 |

Table D–1010. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.85E+04 | 1.81E+04 | -1.84E+04 | 1.78E+04 |
| A2 | -1.85E+04 | 1.81E+04 | -1.84E+04 | 1.78E+04 |
| FD | -2.30E+04 | 2.30E+04 | -2.29E+04 | 2.29E+04 |
| L1 | -1.68E+04 | 1.68E+04 | -1.68E+04 | 1.68E+04 |
| L3 | -1.68E+04 | 1.68E+04 | -1.68E+04 | 1.68E+04 |
| L4 | -4.96E+04 | 4.83E+04 | -4.72E+04 | 4.71E+04 |
| NF | — | — | — | — |
| NS | -5.84E+04 | 5.91E+04 | -4.84E+04 | 4.93E+04 |




Data identically zero, insufficient, or not available from NFA.

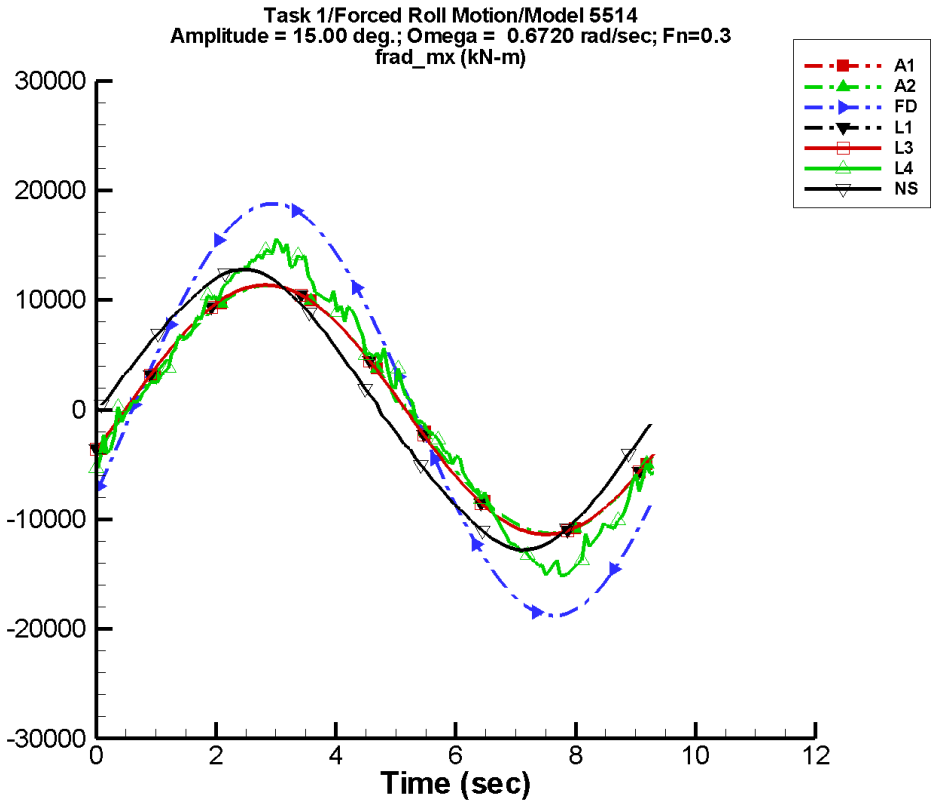
Figure D–506. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1011. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -3.06 | 3.73E+03 | -20 | 10.9 | -86 |
| A2 | -3.06 | 3.73E+03 | -20 | 10.9 | -86 |
| FD | -1.14E-02 | 6.27E+03 | -24 | 1.37E-02 | -166 |
| L1 | 0.176 | 3.79E+03 | -19 | 2.32E-02 | -164 |
| L3 | 0.140 | 3.79E+03 | -19 | 8.36E-03 | -12 |
| L4 | 34.7 | 4.61E+03 | -28 | 88.7 | 147 |
| NF | — | — | — | — | — |
| NS | -0.871 | 4.02E+03 | -2 | 1.10 | 176 |

Table D–1012. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.77E+03 | 3.78E+03 | -3.72E+03 | 3.73E+03 |
| A2 | -3.77E+03 | 3.78E+03 | -3.72E+03 | 3.73E+03 |
| FD | -6.27E+03 | 6.27E+03 | -6.19E+03 | 6.20E+03 |
| L1 | -3.79E+03 | 3.79E+03 | -3.78E+03 | 3.78E+03 |
| L3 | -3.79E+03 | 3.79E+03 | -3.78E+03 | 3.78E+03 |
| L4 | -5.66E+03 | 5.66E+03 | -5.45E+03 | 5.37E+03 |
| NF | — | — | — | — |
| NS | -4.02E+03 | 4.02E+03 | -3.98E+03 | 3.98E+03 |




Data identically zero, insufficient, or not available from NFA.

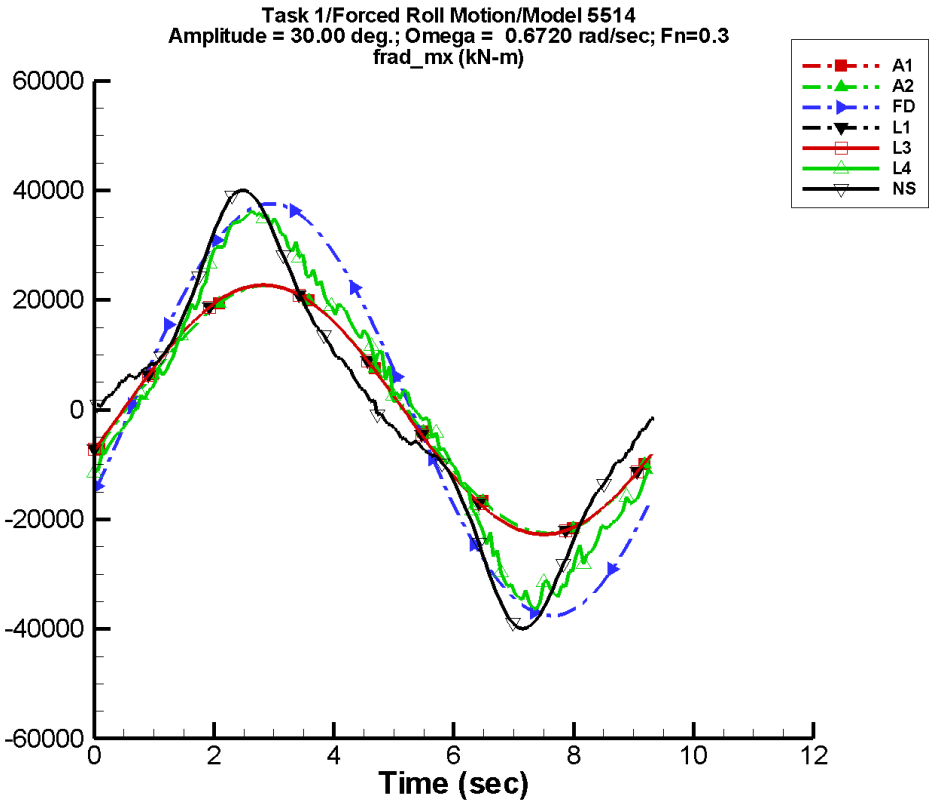
Figure D–507. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1013. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.18 | 1.12E+04 | -20 | 32.8 | -86 |
| A2 | -9.18 | 1.12E+04 | -20 | 32.8 | -86 |
| FD | -3.53E-02 | 1.88E+04 | -24 | 4.03E-02 | -167 |
| L1 | 0.180 | 1.14E+04 | -19 | 2.86E-02 | 150 |
| L3 | 0.149 | 1.14E+04 | -19 | 2.61E-02 | 81 |
| L4 | 92.9 | 1.33E+04 | -25 | 182. | 51 |
| NF | — | — | — | — | — |
| NS | -1.35 | 1.23E+04 | -3 | 2.91 | -171 |

Table D–1014. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.13E+04 | 1.13E+04 | -1.12E+04 | 1.12E+04 |
| A2 | -1.13E+04 | 1.13E+04 | -1.12E+04 | 1.12E+04 |
| FD | -1.88E+04 | 1.88E+04 | -1.86E+04 | 1.86E+04 |
| L1 | -1.14E+04 | 1.14E+04 | -1.13E+04 | 1.13E+04 |
| L3 | -1.14E+04 | 1.14E+04 | -1.13E+04 | 1.13E+04 |
| L4 | -1.51E+04 | 1.56E+04 | -1.47E+04 | 1.46E+04 |
| NF | — | — | — | — |
| NS | -1.28E+04 | 1.28E+04 | -1.26E+04 | 1.26E+04 |




Data identically zero, insufficient, or not available from NFA.

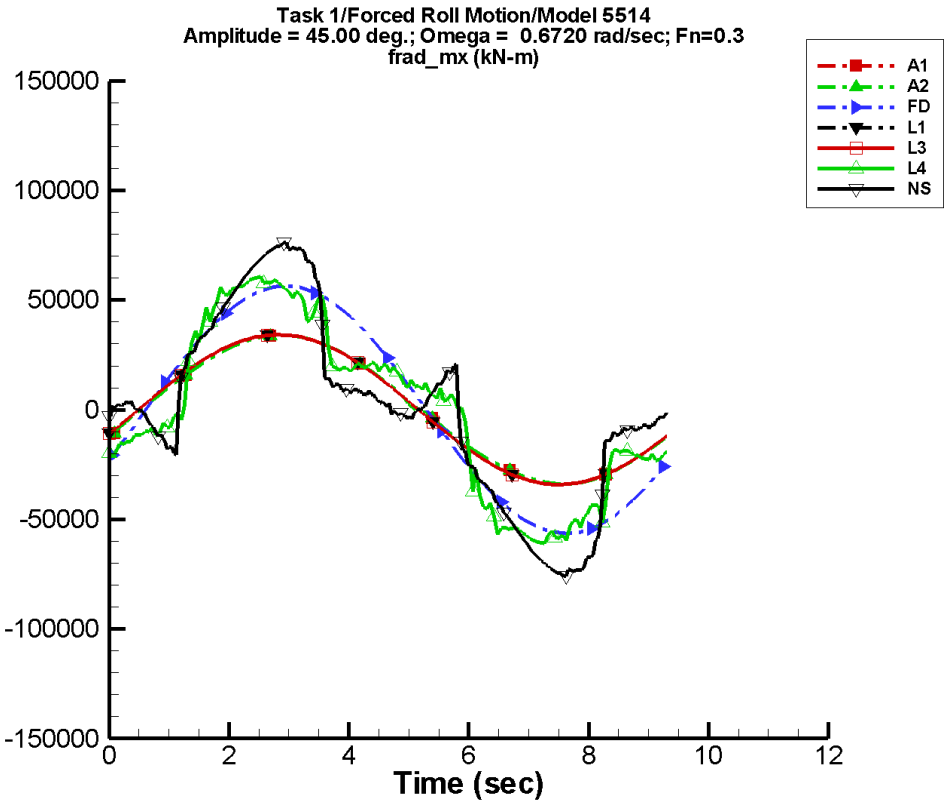
Figure D–508. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1015. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -18.4 | 2.24E+04 | -20 | 65.6 | -86 |
| A2 | -18.4 | 2.24E+04 | -20 | 65.6 | -86 |
| FD | -6.82E-02 | 3.76E+04 | -24 | 8.18E-02 | -169 |
| L1 | 0.197 | 2.28E+04 | -19 | 6.32E-02 | 132 |
| L3 | 0.169 | 2.28E+04 | -19 | 6.24E-02 | 85 |
| L4 | -91.2 | 3.09E+04 | -23 | 523. | -140 |
| NF | — | — | — | — | — |
| NS | 9.36 | 3.03E+04 | -7 | 15.0 | -111 |

Table D–1016. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.26E+04 | 2.27E+04 | -2.23E+04 | 2.24E+04 |
| A2 | -2.26E+04 | 2.27E+04 | -2.23E+04 | 2.24E+04 |
| FD | -3.76E+04 | 3.76E+04 | -3.72E+04 | 3.72E+04 |
| L1 | -2.28E+04 | 2.28E+04 | -2.27E+04 | 2.27E+04 |
| L3 | -2.28E+04 | 2.28E+04 | -2.27E+04 | 2.27E+04 |
| L4 | -3.63E+04 | 3.62E+04 | -3.45E+04 | 3.54E+04 |
| NF | — | — | — | — |
| NS | -4.00E+04 | 4.01E+04 | -3.94E+04 | 3.95E+04 |




Data identically zero, insufficient, or not available from NFA.

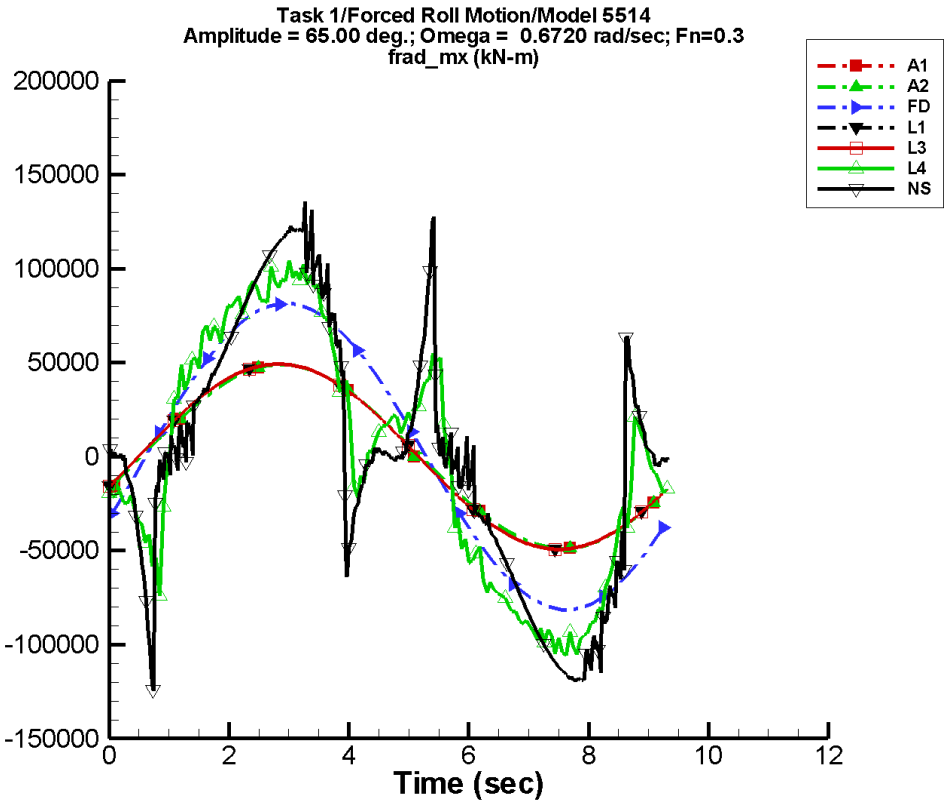
Figure D–509. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1017. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -27.5 | 3.35E+04 | -20 | 98.4 | -86 |
| A2 | -27.5 | 3.35E+04 | -20 | 98.4 | -86 |
| FD | -0.104 | 5.64E+04 | -24 | 0.124 | -167 |
| L1 | 0.217 | 3.41E+04 | -19 | 0.109 | 138 |
| L3 | 0.186 | 3.41E+04 | -19 | 9.98E-02 | 100 |
| L4 | -1.36E+03 | 5.06E+04 | -24 | 2.41E+03 | -152 |
| NF | — | — | — | — | — |
| NS | 41.6 | 5.27E+04 | -15 | 43.2 | -117 |

Table D–1018. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.39E+04 | 3.40E+04 | -3.35E+04 | 3.36E+04 |
| A2 | -3.39E+04 | 3.40E+04 | -3.35E+04 | 3.36E+04 |
| FD | -5.64E+04 | 5.64E+04 | -5.57E+04 | 5.58E+04 |
| L1 | -3.41E+04 | 3.41E+04 | -3.40E+04 | 3.40E+04 |
| L3 | -3.41E+04 | 3.41E+04 | -3.40E+04 | 3.40E+04 |
| L4 | -6.09E+04 | 6.06E+04 | -5.91E+04 | 5.90E+04 |
| NF | — | — | — | — |
| NS | -7.59E+04 | 7.62E+04 | -7.47E+04 | 7.50E+04 |




Data identically zero, insufficient, or not available from NFA.

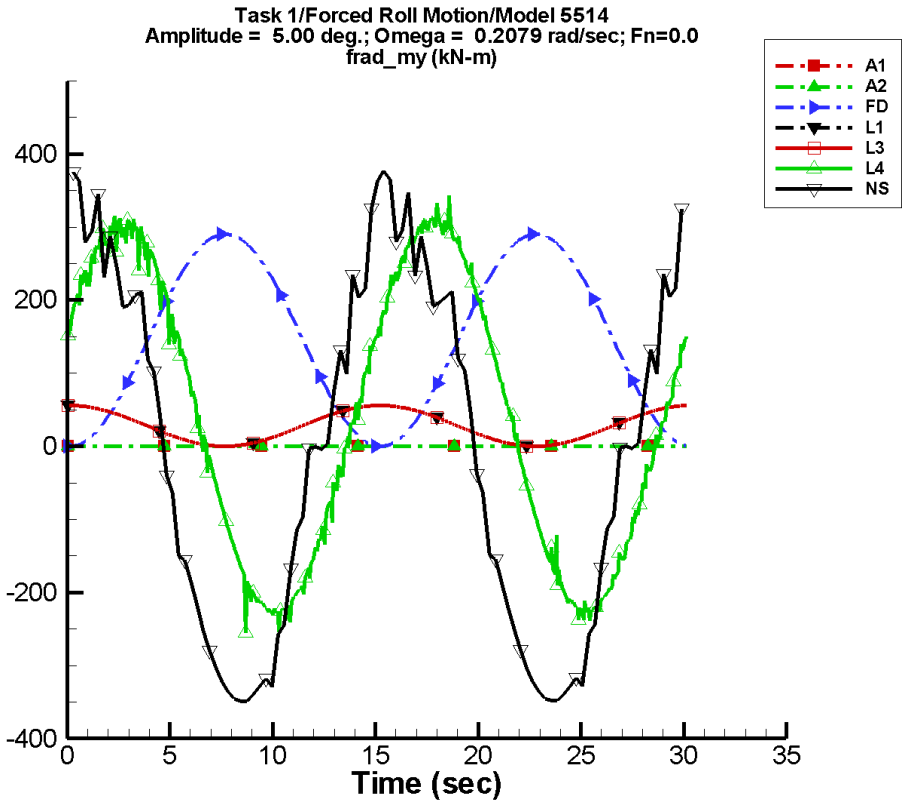
Figure D–510. Time history of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1019. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -39.8 | 4.84E+04 | -20 | 142. | -86 |
| A2 | -39.8 | 4.84E+04 | -20 | 142. | -86 |
| FD | -0.148 | 8.15E+04 | -24 | 0.180 | -167 |
| L1 | 0.253 | 4.93E+04 | -19 | 0.137 | 117 |
| L3 | 0.211 | 4.93E+04 | -19 | 0.165 | 81 |
| L4 | -2.92E+03 | 8.12E+04 | -22 | 4.73E+03 | -152 |
| NF | — | — | — | — | — |
| NS | 363. | 7.73E+04 | -24 | 711. | -112 |

Table D–1020. Minimum and maximum of of $M_x^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.90E+04 | 4.91E+04 | -4.83E+04 | 4.85E+04 |
| A2 | -4.90E+04 | 4.91E+04 | -4.83E+04 | 4.85E+04 |
| FD | -8.15E+04 | 8.15E+04 | -8.05E+04 | 8.05E+04 |
| L1 | -4.93E+04 | 4.93E+04 | -4.91E+04 | 4.91E+04 |
| L3 | -4.93E+04 | 4.93E+04 | -4.91E+04 | 4.91E+04 |
| L4 | -1.06E+05 | 1.04E+05 | -1.00E+05 | 9.72E+04 |
| NF | — | — | — | — |
| NS | -1.25E+05 | 1.36E+05 | -1.19E+05 | 1.21E+05 |




Data identically zero, insufficient, or not available from NFA.

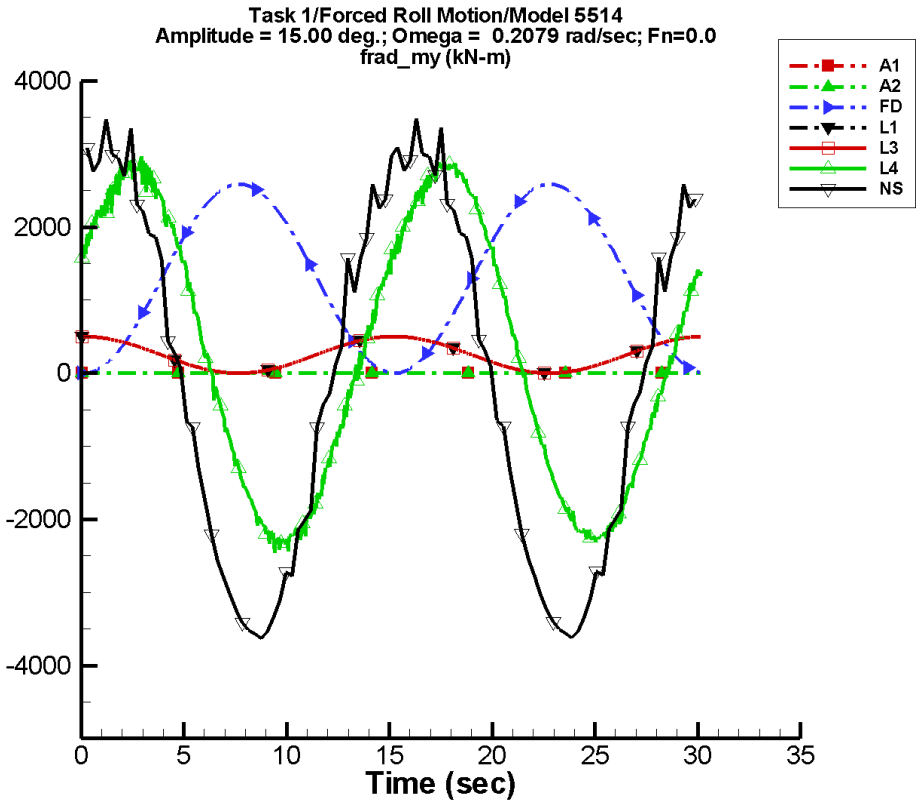
Figure D–511. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1021. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.33E-04 | 3.70E-02 | 14 | 3.14E-04 | 107 |
| A2 | 3.33E-04 | 3.70E-02 | 14 | 3.14E-04 | 107 |
| FD | 145. | 1.18E-03 | -3 | 145. | -94 |
| L1 | 27.9 | 9.85E-03 | 169 | 27.9 | 87 |
| L3 | 27.9 | 9.85E-03 | 169 | 27.9 | 87 |
| L4 | 39.3 | 4.36 | -160 | 264. | 27 |
| NF | — | — | — | — | — |
| NS | -9.04 | 0.626 | -12 | 338. | 68 |

Table D–1022. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -0.244 | 0.244 | -6.74E-02 | 6.82E-02 |
| A2 | -0.244 | 0.244 | -6.74E-02 | 6.82E-02 |
| FD | -0.279 | 290. | -0.855 | 290. |
| L1 | -1.10E-02 | 55.9 | 3.38E-02 | 55.9 |
| L3 | -1.12E-02 | 55.9 | 3.36E-02 | 55.9 |
| L4 | -255. | 343. | -229. | 309. |
| NF | — | — | — | — |
| NS | -352. | 377. | -342. | 352. |




Data identically zero, insufficient, or not available from NFA.

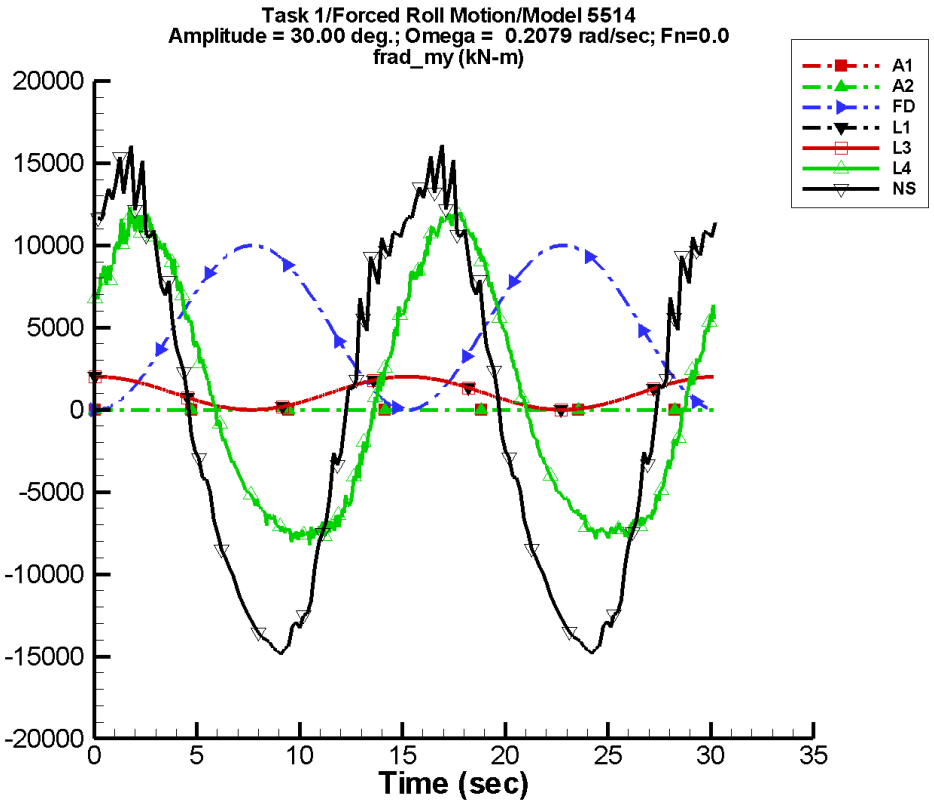
Figure D–512. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1023. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.00E-03 | 0.111 | 14 | 9.41E-04 | 107 |
| A2 | 1.00E-03 | 0.111 | 14 | 9.41E-04 | 107 |
| FD | 1.30E+03 | 0.101 | -3 | 1.29E+03 | -94 |
| L1 | 251. | 3.71E-02 | 152 | 251. | 87 |
| L3 | 251. | 3.70E-02 | 152 | 251. | 87 |
| L4 | 260. | 31.0 | -152 | 2.52E+03 | 33 |
| NF | — | — | — | — | — |
| NS | -80.1 | 6.08 | -13 | 3.36E+03 | 66 |

Table D–1024. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -0.733 | 0.733 | -0.202 | 0.205 |
| A2 | -0.733 | 0.733 | -0.202 | 0.205 |
| FD | -2.51 | 2.59E+03 | -7.63 | 2.58E+03 |
| L1 | -2.16E-02 | 503. | 0.377 | 503. |
| L3 | -2.15E-02 | 503. | 0.377 | 503. |
| L4 | -2.45E+03 | 2.96E+03 | -2.31E+03 | 2.84E+03 |
| NF | — | — | — | — |
| NS | -3.66E+03 | 3.49E+03 | -3.46E+03 | 3.02E+03 |




Data identically zero, insufficient, or not available from NFA.

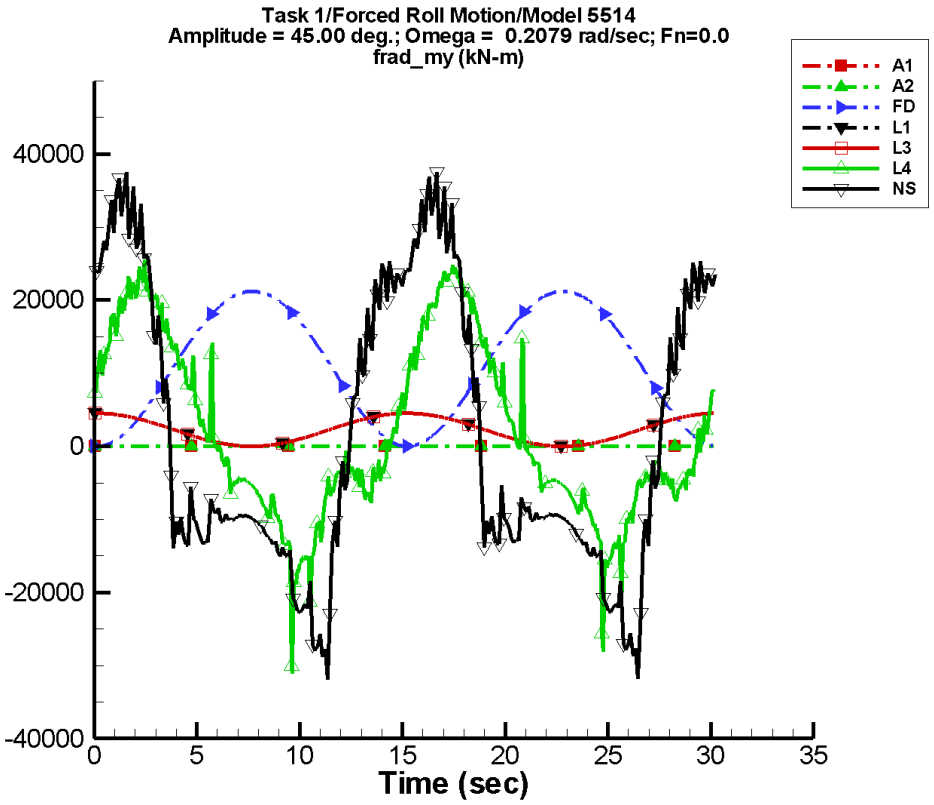
Figure D–513. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1025. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.00E-03 | 0.222 | 14 | 1.88E-03 | 107 |
| A2 | 2.00E-03 | 0.222 | 14 | 1.88E-03 | 107 |
| FD | 5.05E+03 | 1.58 | -3 | 5.00E+03 | -94 |
| L1 | 1.00E+03 | 0.103 | 137 | 1.00E+03 | 87 |
| L3 | 1.00E+03 | 0.103 | 137 | 1.00E+03 | 87 |
| L4 | 793. | 113. | 140 | 9.64E+03 | 36 |
| NF | — | — | — | — | — |
| NS | -254. | 27.9 | -13 | 1.44E+04 | 66 |

Table D–1026. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.47 | 1.47 | -0.404 | 0.409 |
| A2 | -1.47 | 1.47 | -0.404 | 0.409 |
| FD | -10.0 | 9.99E+03 | -29.6 | 9.97E+03 |
| L1 | -2.03E-02 | 2.01E+03 | 1.55 | 2.01E+03 |
| L3 | -2.31E-02 | 2.01E+03 | 1.55 | 2.01E+03 |
| L4 | -8.24E+03 | 1.24E+04 | -7.64E+03 | 1.18E+04 |
| NF | — | — | — | — |
| NS | -1.50E+04 | 1.61E+04 | -1.45E+04 | 1.42E+04 |




Data identically zero, insufficient, or not available from NFA.

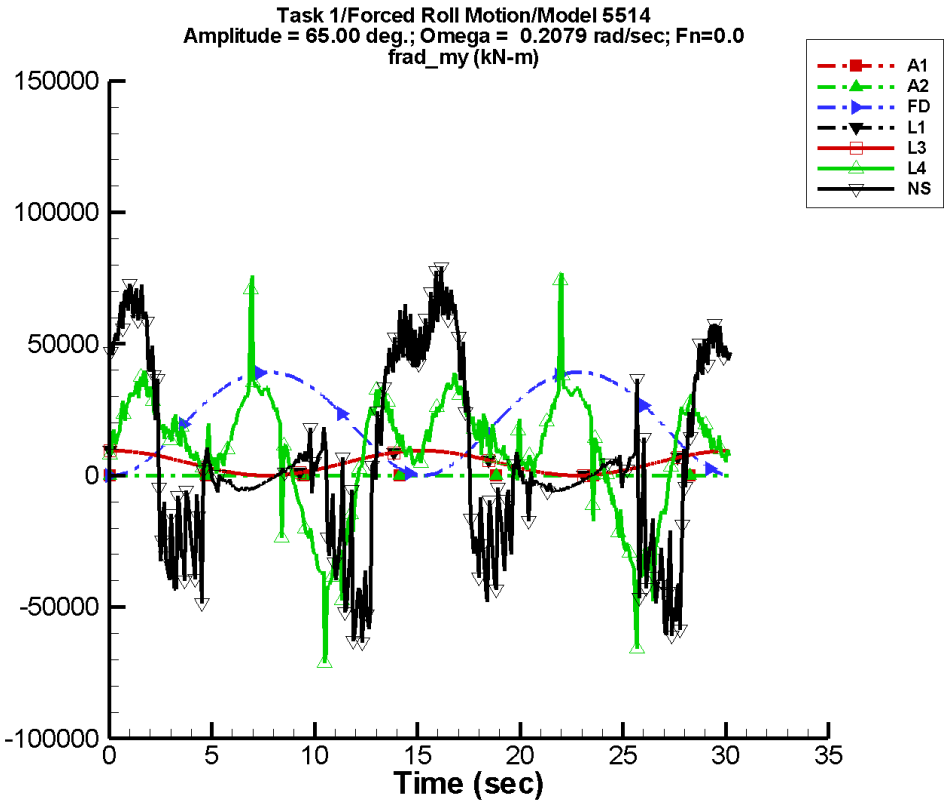
Figure D–514. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1027. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.00E-03 | 0.333 | 14 | 2.82E-03 | 107 |
| A2 | 3.00E-03 | 0.333 | 14 | 2.82E-03 | 107 |
| FD | 1.09E+04 | 7.81 | -3 | 1.06E+04 | -94 |
| L1 | 2.26E+03 | 0.202 | 129 | 2.26E+03 | 87 |
| L3 | 2.26E+03 | 0.202 | 128 | 2.26E+03 | 87 |
| L4 | 1.93E+03 | 191. | 144 | 1.58E+04 | 34 |
| NF | — | — | — | — | — |
| NS | 1.27E+03 | 47.1 | -13 | 2.39E+04 | 67 |

Table D–1028. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.20 | 2.20 | -0.607 | 0.614 |
| A2 | -2.20 | 2.20 | -0.607 | 0.614 |
| FD | -22.6 | 2.12E+04 | -63.2 | 2.12E+04 |
| L1 | -2.14E-02 | 4.53E+03 | 3.51 | 4.52E+03 |
| L3 | -2.52E-02 | 4.53E+03 | 3.51 | 4.52E+03 |
| L4 | -3.10E+04 | 2.55E+04 | -2.02E+04 | 2.38E+04 |
| NF | — | — | — | — |
| NS | -3.23E+04 | 3.75E+04 | -2.66E+04 | 3.33E+04 |




Data identically zero, insufficient, or not available from NFA.

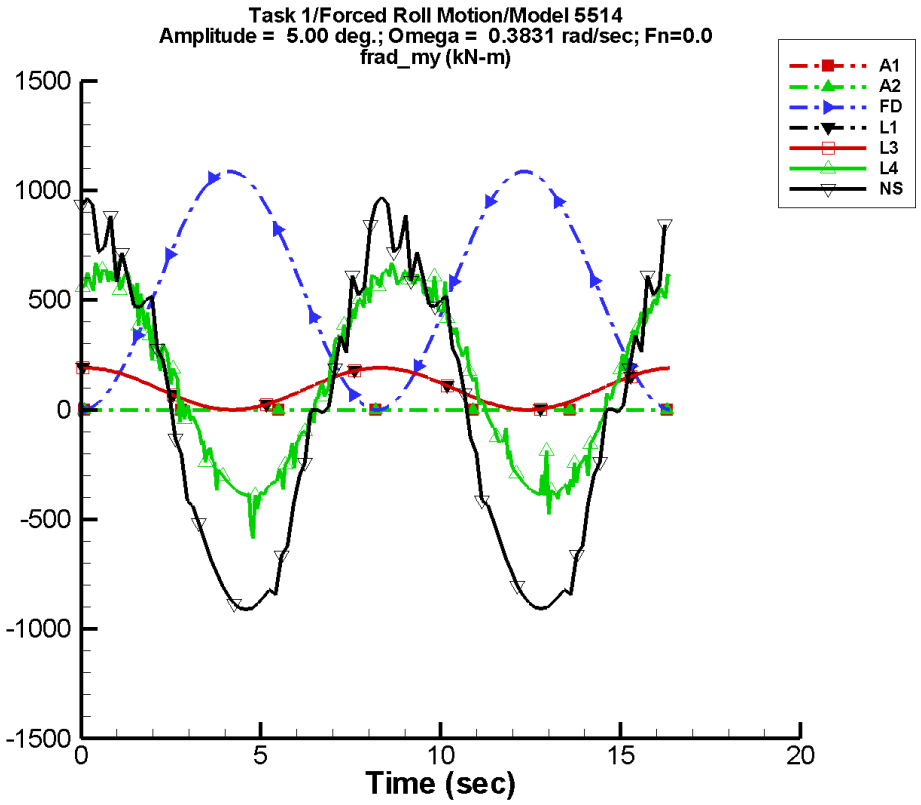
Figure D–515. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1029. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.33E-03 | 0.481 | 14 | 4.08E-03 | 107 |
| A2 | 4.33E-03 | 0.481 | 14 | 4.08E-03 | 107 |
| FD | 2.08E+04 | 32.3 | -3 | 1.97E+04 | -94 |
| L1 | 4.72E+03 | 0.392 | 122 | 4.72E+03 | 87 |
| L3 | 4.72E+03 | 0.391 | 122 | 4.72E+03 | 87 |
| L4 | 9.36E+03 | 726. | 163 | 1.68E+04 | 16 |
| NF | — | — | — | — | — |
| NS | 6.07E+03 | 216. | -23 | 2.37E+04 | 77 |

Table D–1030. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.17 | 3.18 | -0.876 | 0.887 |
| A2 | -3.17 | 3.18 | -0.876 | 0.887 |
| FD | -47.1 | 3.92E+04 | -119. | 3.92E+04 |
| L1 | -2.58E-02 | 9.44E+03 | 7.37 | 9.44E+03 |
| L3 | -2.31E-02 | 9.44E+03 | 7.37 | 9.44E+03 |
| L4 | -7.11E+04 | 7.95E+04 | -4.80E+04 | 4.51E+04 |
| NF | — | — | — | — |
| NS | -6.34E+04 | 7.91E+04 | -5.06E+04 | 6.72E+04 |




Data identically zero, insufficient, or not available from NFA.

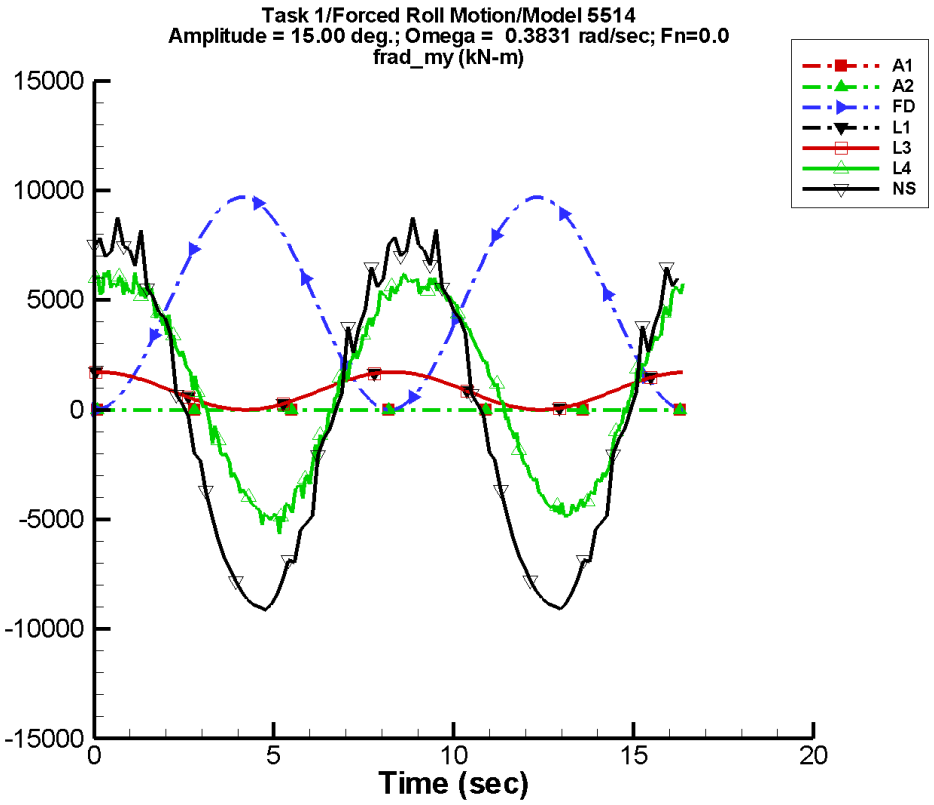
Figure D–516. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1031. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.34E-04 | 0.431 | -17 | 9.68E-03 | 129 |
| A2 | 5.34E-04 | 0.431 | -17 | 9.68E-03 | 129 |
| FD | 544. | 8.35E-03 | -59 | 544. | -91 |
| L1 | 95.5 | 3.11E-02 | -153 | 95.5 | 85 |
| L3 | 95.5 | 3.10E-02 | -153 | 95.5 | 85 |
| L4 | 125. | 22.9 | -168 | 512. | 63 |
| NF | — | — | — | — | — |
| NS | -32.0 | 0.833 | -143 | 873. | 69 |

Table D–1032. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -0.682 | 0.539 | -0.432 | 0.465 |
| A2 | -0.682 | 0.539 | -0.432 | 0.465 |
| FD | 0.204 | 1.09E+03 | 3.85 | 1.08E+03 |
| L1 | 5.74E-03 | 191. | 0.517 | 191. |
| L3 | 6.55E-03 | 191. | 0.518 | 191. |
| L4 | -587. | 683. | -439. | 622. |
| NF | — | — | — | — |
| NS | -910. | 973. | -884. | 907. |




Data identically zero, insufficient, or not available from NFA.

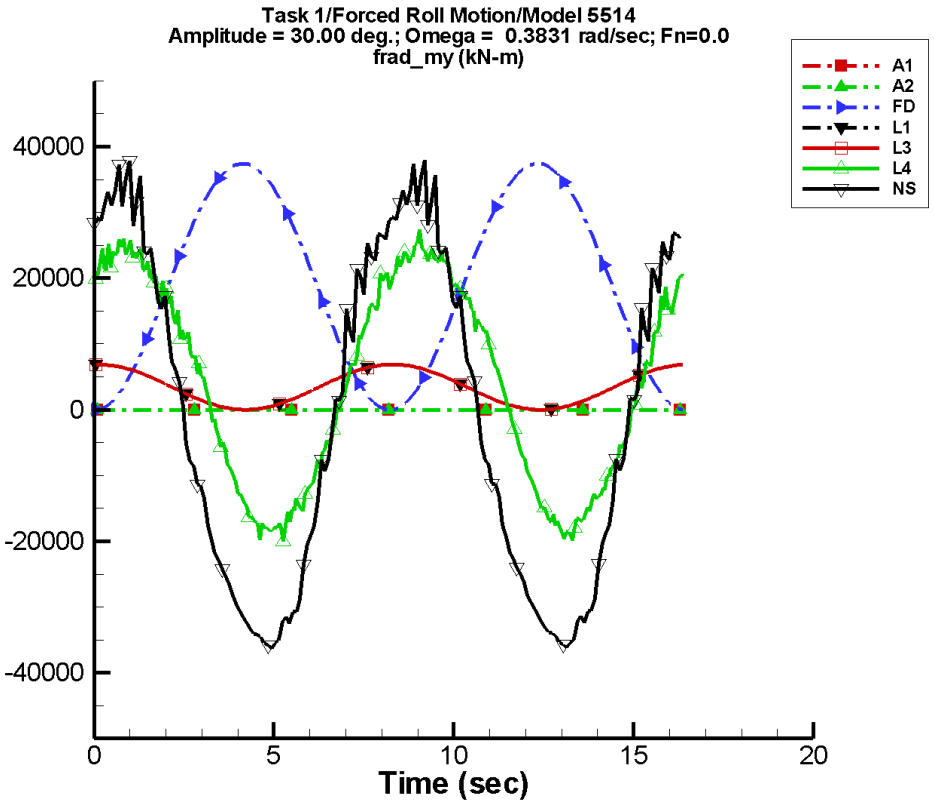
Figure D–517. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1033. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 1.60E-03 | 1.29 | -17 | 2.90E-02 | 129 |
| A2 | 1.60E-03 | 1.29 | -17 | 2.90E-02 | 129 |
| FD | 4.86E+03 | 0.663 | -60 | 4.84E+03 | -91 |
| L1 | 859. | 0.107 | -135 | 859. | 85 |
| L3 | 859. | 0.107 | -135 | 859. | 85 |
| L4 | 914. | 165. | -176 | 5.36E+03 | 56 |
| NF | — | — | — | — | — |
| NS | -338. | 8.75 | -146 | 8.44E+03 | 67 |

Table D–1034. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.05 | 1.62 | -1.29 | 1.39 |
| A2 | -2.05 | 1.62 | -1.29 | 1.39 |
| FD | 1.84 | 9.68E+03 | 34.8 | 9.61E+03 |
| L1 | 0.234 | 1.72E+03 | 4.83 | 1.72E+03 |
| L3 | 0.233 | 1.72E+03 | 4.83 | 1.72E+03 |
| L4 | -5.66E+03 | 6.74E+03 | -4.98E+03 | 6.03E+03 |
| NF | — | — | — | — |
| NS | -9.13E+03 | 8.82E+03 | -8.65E+03 | 7.59E+03 |




Data identically zero, insufficient, or not available from NFA.

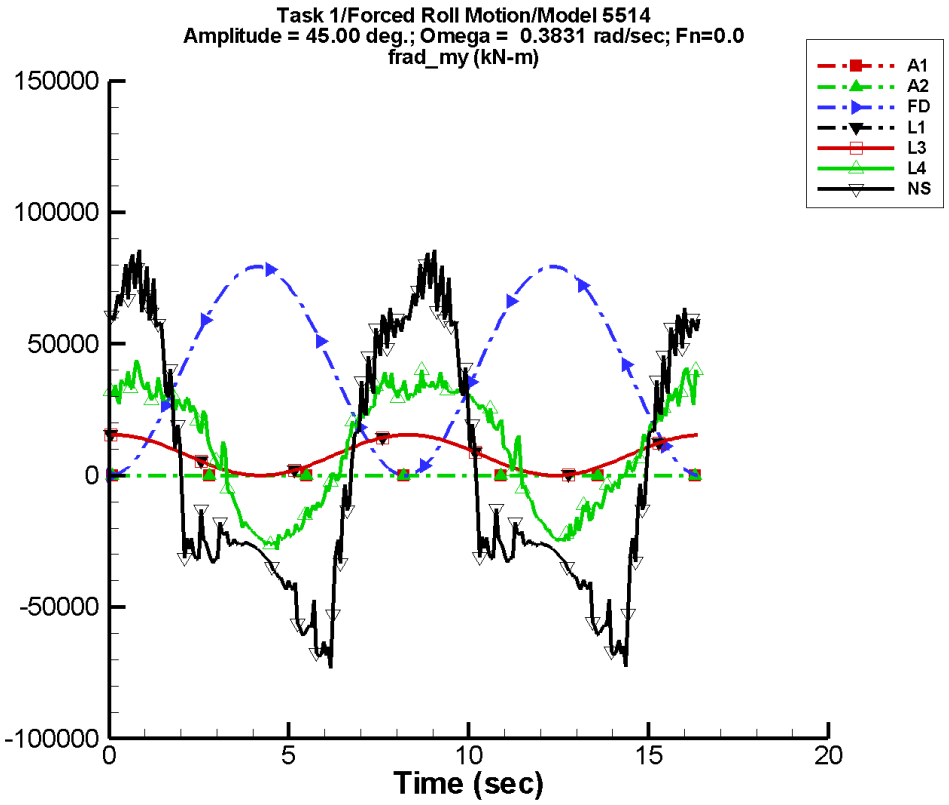
Figure D–518. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1035. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.20E-03 | 2.59 | -17 | 5.80E-02 | 129 |
| A2 | 3.20E-03 | 2.59 | -17 | 5.80E-02 | 129 |
| FD | 1.89E+04 | 10.4 | -60 | 1.87E+04 | -91 |
| L1 | 3.44E+03 | 0.271 | -117 | 3.44E+03 | 85 |
| L3 | 3.44E+03 | 0.272 | -117 | 3.44E+03 | 85 |
| L4 | 3.92E+03 | 518. | -160 | 2.12E+04 | 50 |
| NF | — | — | — | — | — |
| NS | -1.26E+03 | 39.1 | -146 | 3.48E+04 | 67 |

Table D–1036. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.09 | 3.23 | -2.59 | 2.79 |
| A2 | -4.09 | 3.23 | -2.59 | 2.79 |
| FD | 7.34 | 3.74E+04 | 140. | 3.71E+04 |
| L1 | 0.779 | 6.88E+03 | 19.2 | 6.87E+03 |
| L3 | 0.776 | 6.88E+03 | 19.1 | 6.87E+03 |
| L4 | -2.00E+04 | 2.74E+04 | -1.86E+04 | 2.50E+04 |
| NF | — | — | — | — |
| NS | -3.63E+04 | 3.81E+04 | -3.50E+04 | 3.39E+04 |




Data identically zero, insufficient, or not available from NFA.

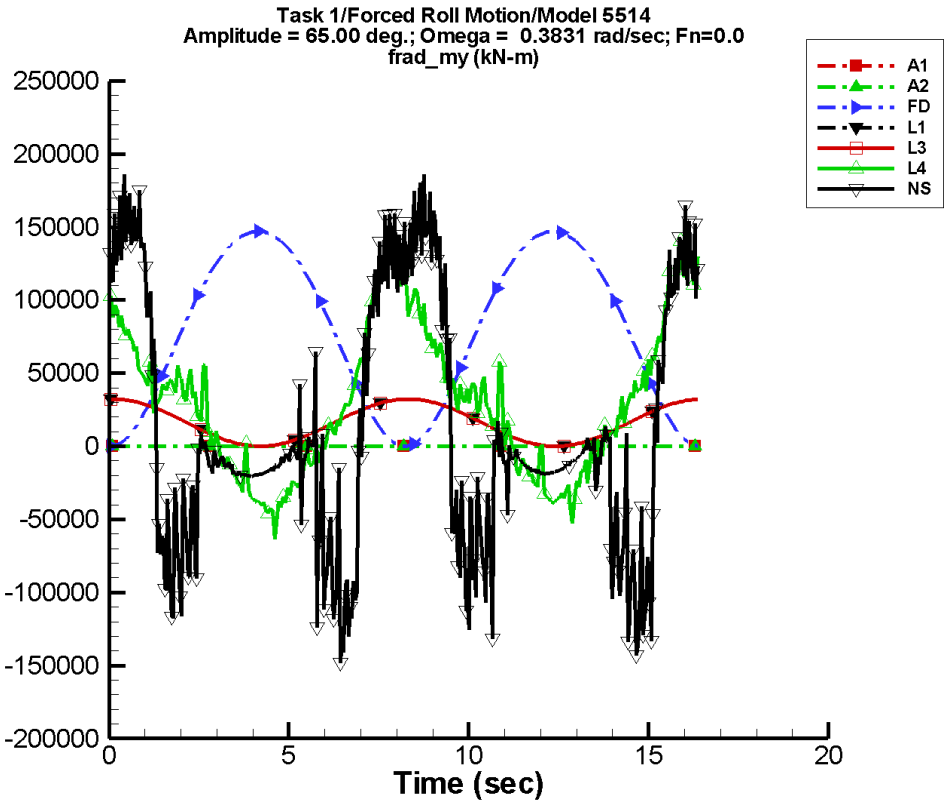
Figure D–519. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1037. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 4.81E-03 | 3.88 | -17 | 8.71E-02 | 129 |
| A2 | 4.81E-03 | 3.88 | -17 | 8.71E-02 | 129 |
| FD | 4.08E+04 | 51.2 | -60 | 3.96E+04 | -91 |
| L1 | 7.73E+03 | 0.514 | -105 | 7.73E+03 | 85 |
| L3 | 7.73E+03 | 0.519 | -105 | 7.73E+03 | 85 |
| L4 | 1.04E+04 | 1.23E+03 | 177 | 2.94E+04 | 64 |
| NF | — | — | — | — | — |
| NS | 1.41E+03 | 74.7 | -147 | 5.92E+04 | 68 |

Table D–1038. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.14 | 4.85 | -3.88 | 4.18 |
| A2 | -6.14 | 4.85 | -3.88 | 4.18 |
| FD | 16.5 | 7.94E+04 | 318. | 7.88E+04 |
| L1 | 1.60 | 1.55E+04 | 43.0 | 1.55E+04 |
| L3 | 1.61 | 1.55E+04 | 43.0 | 1.55E+04 |
| L4 | -2.81E+04 | 4.39E+04 | -2.56E+04 | 3.74E+04 |
| NF | — | — | — | — |
| NS | -7.32E+04 | 8.62E+04 | -6.43E+04 | 7.65E+04 |




Data identically zero, insufficient, or not available from NFA.

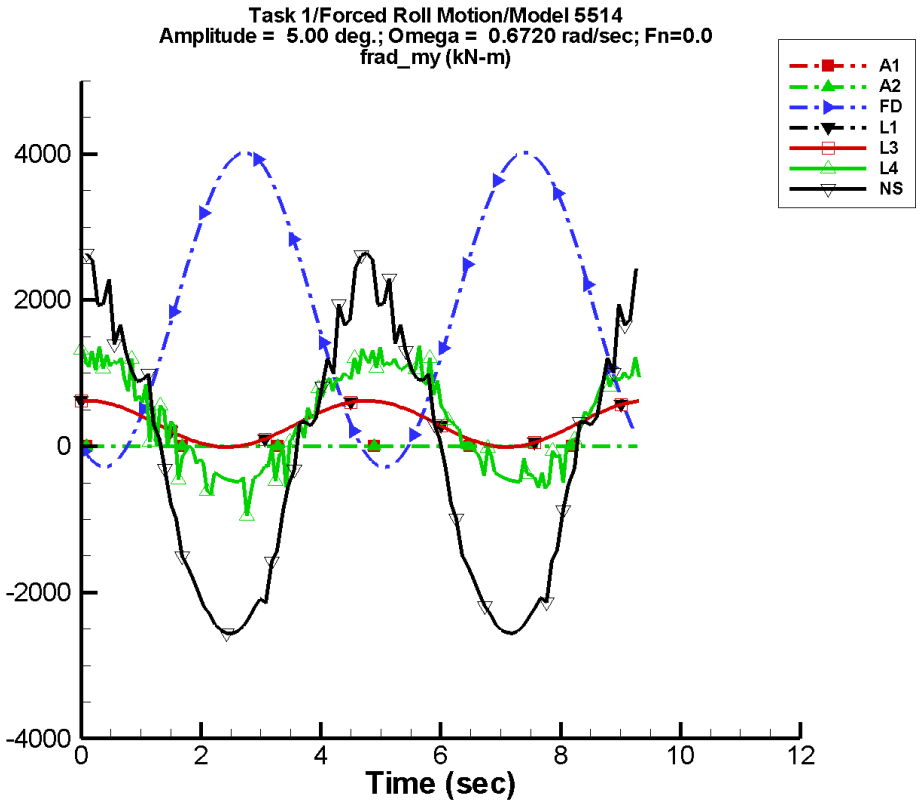
Figure D–520. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1039. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 6.94E-03 | 5.61 | -17 | 0.126 | 129 |
| A2 | 6.94E-03 | 5.61 | -17 | 0.126 | 129 |
| FD | 7.80E+04 | 211. | -60 | 7.32E+04 | -91 |
| L1 | 1.61E+04 | 1.01 | -97 | 1.61E+04 | 85 |
| L3 | 1.61E+04 | 1.01 | -97 | 1.61E+04 | 85 |
| L4 | 3.01E+04 | 4.11E+03 | -173 | 6.41E+04 | 88 |
| NF | — | — | — | — | — |
| NS | 9.86E+03 | 324. | -108 | 6.53E+04 | 80 |

Table D–1040. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.87 | 7.00 | -5.61 | 6.04 |
| A2 | -8.87 | 7.00 | -5.61 | 6.04 |
| FD | 34.5 | 1.47E+05 | 676. | 1.46E+05 |
| L1 | 3.18 | 3.23E+04 | 89.5 | 3.23E+04 |
| L3 | 3.17 | 3.23E+04 | 89.5 | 3.23E+04 |
| L4 | -6.36E+04 | 1.44E+05 | -4.56E+04 | 1.32E+05 |
| NF | — | — | — | — |
| NS | -1.48E+05 | 1.86E+05 | -1.13E+05 | 1.57E+05 |




Data identically zero, insufficient, or not available from NFA.

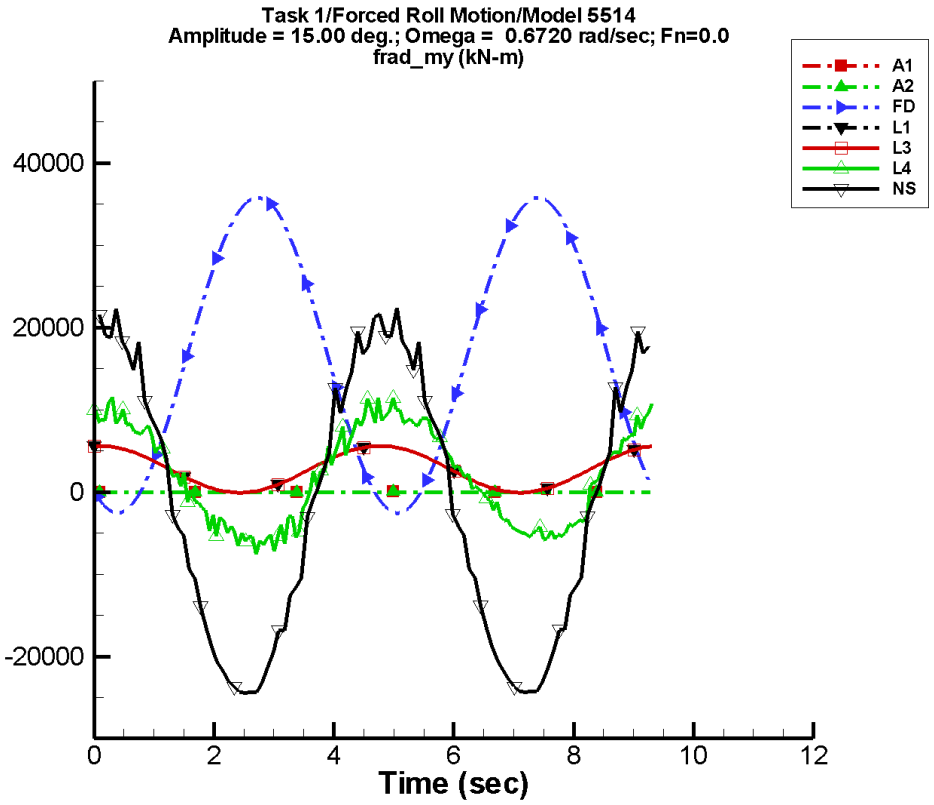
Figure D–521. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1041. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.94E-03 | 2.82 | -116 | 1.75E-02 | 134 |
| A2 | 9.94E-03 | 2.82 | -116 | 1.75E-02 | 134 |
| FD | 1.86E+03 | 4.93E-02 | -66 | 2.15E+03 | -120 |
| L1 | 306. | 9.64E-02 | 175 | 316. | 83 |
| L3 | 306. | 9.60E-02 | 175 | 316. | 83 |
| L4 | 356. | 88.0 | -151 | 862. | 71 |
| NF | — | — | — | — | — |
| NS | -144. | 3.24 | -170 | 2.41E+03 | 79 |

Table D–1042. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.54 | 3.72 | -2.96 | 2.85 |
| A2 | -3.54 | 3.72 | -2.96 | 2.85 |
| FD | -289. | 4.02E+03 | -198. | 3.93E+03 |
| L1 | -10.1 | 622. | -4.95 | 623. |
| L3 | -10.1 | 622. | -4.95 | 623. |
| L4 | -948. | 1.37E+03 | -530. | 1.20E+03 |
| NF | — | — | — | — |
| NS | -2.56E+03 | 2.65E+03 | -2.47E+03 | 2.49E+03 |




Data identically zero, insufficient, or not available from NFA.

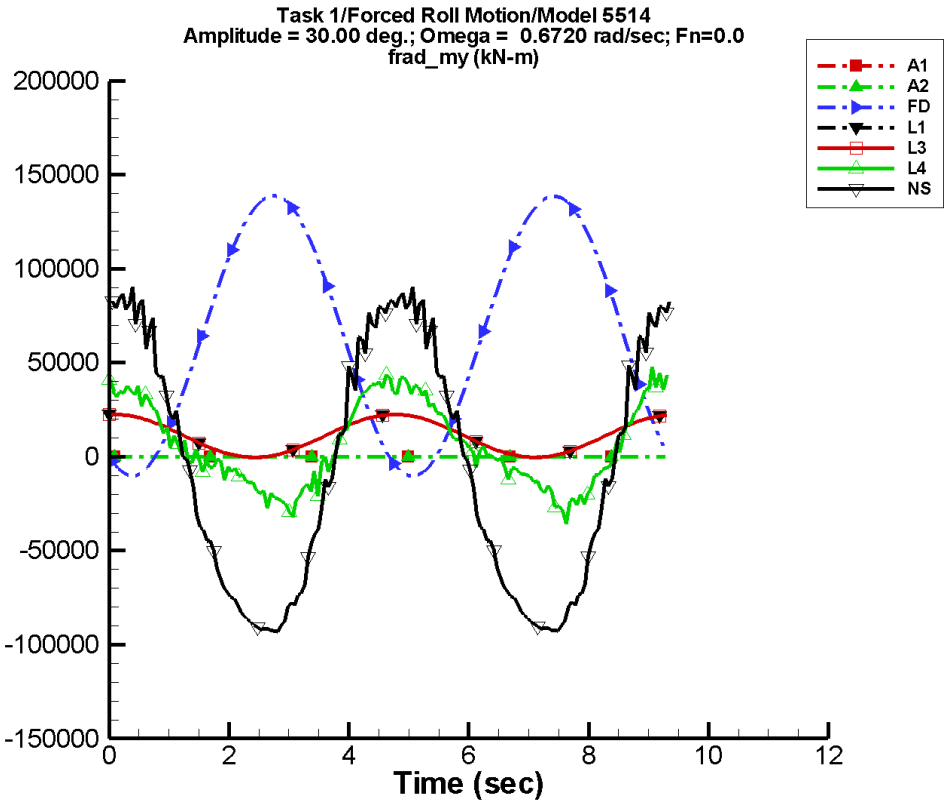
Figure D–522. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1043. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 2.98E-02 | 8.45 | -116 | 5.23E-02 | 134 |
| A2 | 2.98E-02 | 8.45 | -116 | 5.23E-02 | 134 |
| FD | 1.67E+04 | 4.05 | -56 | 1.92E+04 | -120 |
| L1 | 2.75E+03 | 0.236 | -125 | 2.84E+03 | 83 |
| L3 | 2.75E+03 | 0.233 | -126 | 2.84E+03 | 83 |
| L4 | 1.98E+03 | 609. | -151 | 7.94E+03 | 67 |
| NF | — | — | — | — | — |
| NS | -1.60E+03 | 29.7 | -175 | 2.26E+04 | 77 |

Table D–1044. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -10.6 | 11.2 | -8.87 | 8.56 |
| A2 | -10.6 | 11.2 | -8.87 | 8.56 |
| FD | -2.60E+03 | 3.58E+04 | -1.78E+03 | 3.51E+04 |
| L1 | -90.8 | 5.60E+03 | -43.7 | 5.61E+03 |
| L3 | -90.7 | 5.60E+03 | -43.7 | 5.61E+03 |
| L4 | -7.57E+03 | 1.16E+04 | -6.09E+03 | 9.94E+03 |
| NF | — | — | — | — |
| NS | -2.45E+04 | 2.24E+04 | -2.37E+04 | 2.08E+04 |




Data identically zero, insufficient, or not available from NFA.

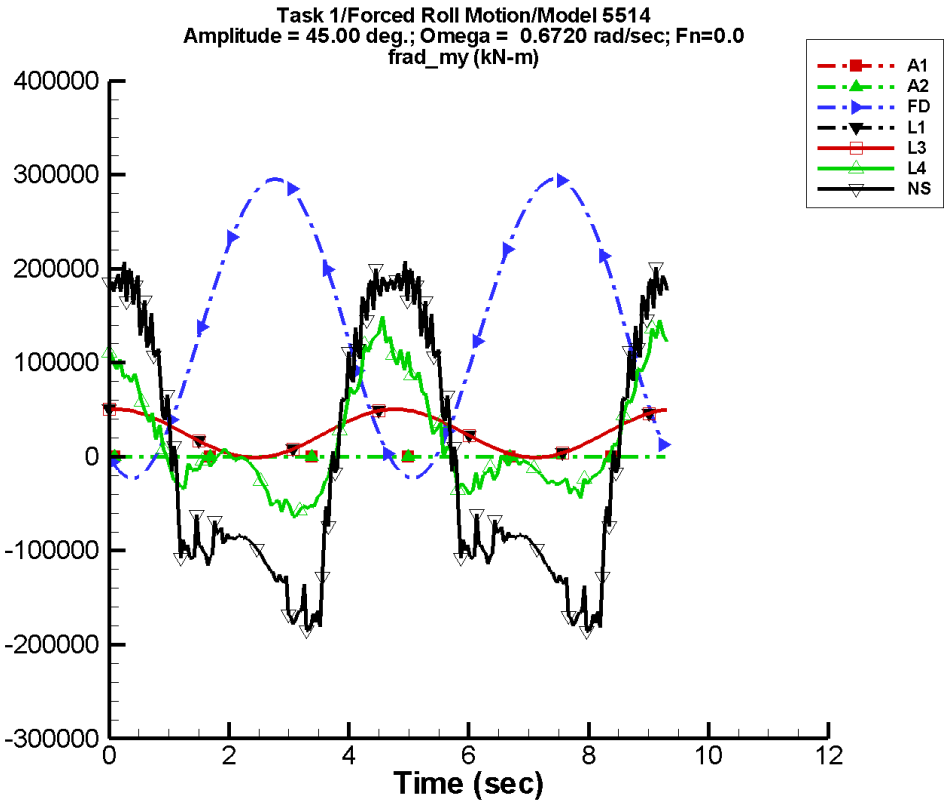
Figure D–523. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1045. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 5.96E-02 | 16.9 | -116 | 0.105 | 134 |
| A2 | 5.96E-02 | 16.9 | -116 | 0.105 | 134 |
| FD | 6.49E+04 | 64.1 | -55 | 7.45E+04 | -121 |
| L1 | 1.10E+04 | 1.02 | -82 | 1.14E+04 | 83 |
| L3 | 1.10E+04 | 1.02 | -81 | 1.14E+04 | 83 |
| L4 | 5.85E+03 | 2.09E+03 | -133 | 2.94E+04 | 72 |
| NF | — | — | — | — | — |
| NS | -6.69E+03 | 123. | -174 | 9.05E+04 | 76 |

Table D–1046. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -21.2 | 22.3 | -17.7 | 17.1 |
| A2 | -21.2 | 22.3 | -17.7 | 17.1 |
| FD | -1.04E+04 | 1.39E+05 | -7.08E+03 | 1.36E+05 |
| L1 | -362. | 2.24E+04 | -174. | 2.24E+04 |
| L3 | -362. | 2.24E+04 | -174. | 2.24E+04 |
| L4 | -3.56E+04 | 4.79E+04 | -2.61E+04 | 3.94E+04 |
| NF | — | — | — | — |
| NS | -9.32E+04 | 9.08E+04 | -9.15E+04 | 8.33E+04 |




Data identically zero, insufficient, or not available from NFA.

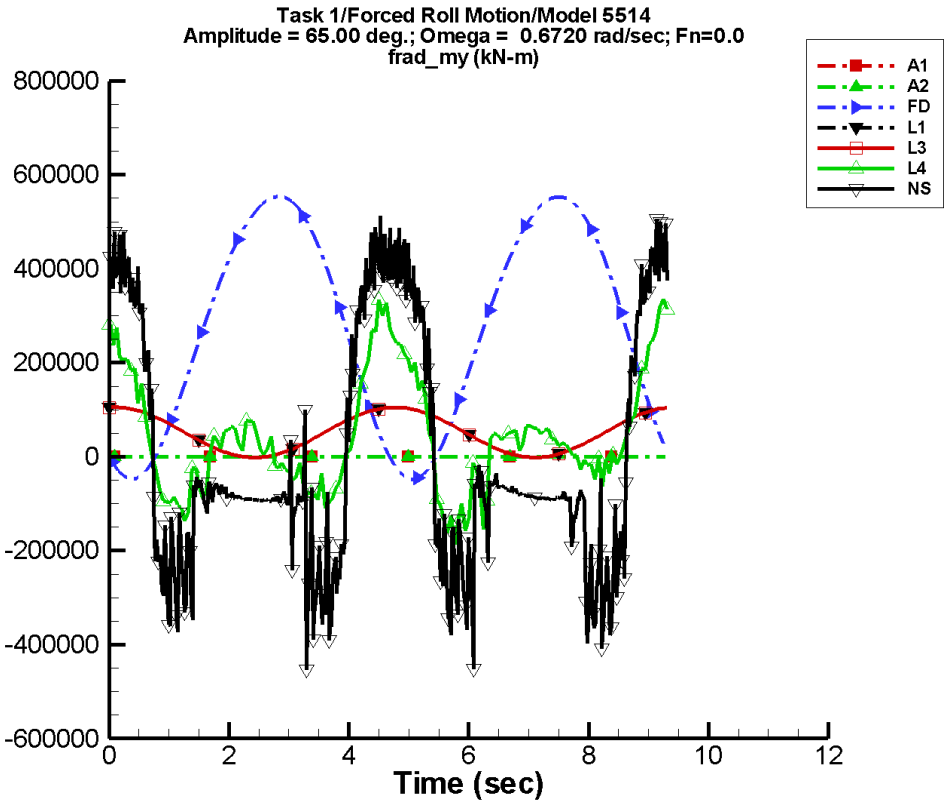
Figure D–524. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1047. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 8.94E-02 | 25.4 | -116 | 0.157 | 134 |
| A2 | 8.94E-02 | 25.4 | -116 | 0.157 | 134 |
| FD | 1.40E+05 | 317. | -55 | 1.59E+05 | -121 |
| L1 | 2.48E+04 | 2.59 | -71 | 2.56E+04 | 83 |
| L3 | 2.48E+04 | 2.60 | -71 | 2.56E+04 | 83 |
| L4 | 1.69E+04 | 5.68E+03 | 174 | 6.60E+04 | 89 |
| NF | — | — | — | — | — |
| NS | -6.13E+03 | 135. | -150 | 1.64E+05 | 77 |

Table D–1048. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -31.9 | 33.5 | -26.6 | 25.7 |
| A2 | -31.9 | 33.5 | -26.6 | 25.7 |
| FD | -2.32E+04 | 2.96E+05 | -1.58E+04 | 2.89E+05 |
| L1 | -814. | 5.04E+04 | -391. | 5.04E+04 |
| L3 | -814. | 5.04E+04 | -391. | 5.04E+04 |
| L4 | -6.35E+04 | 1.50E+05 | -5.62E+04 | 1.25E+05 |
| NF | — | — | — | — |
| NS | -1.87E+05 | 2.09E+05 | -1.75E+05 | 1.90E+05 |




Data identically zero, insufficient, or not available from NFA.

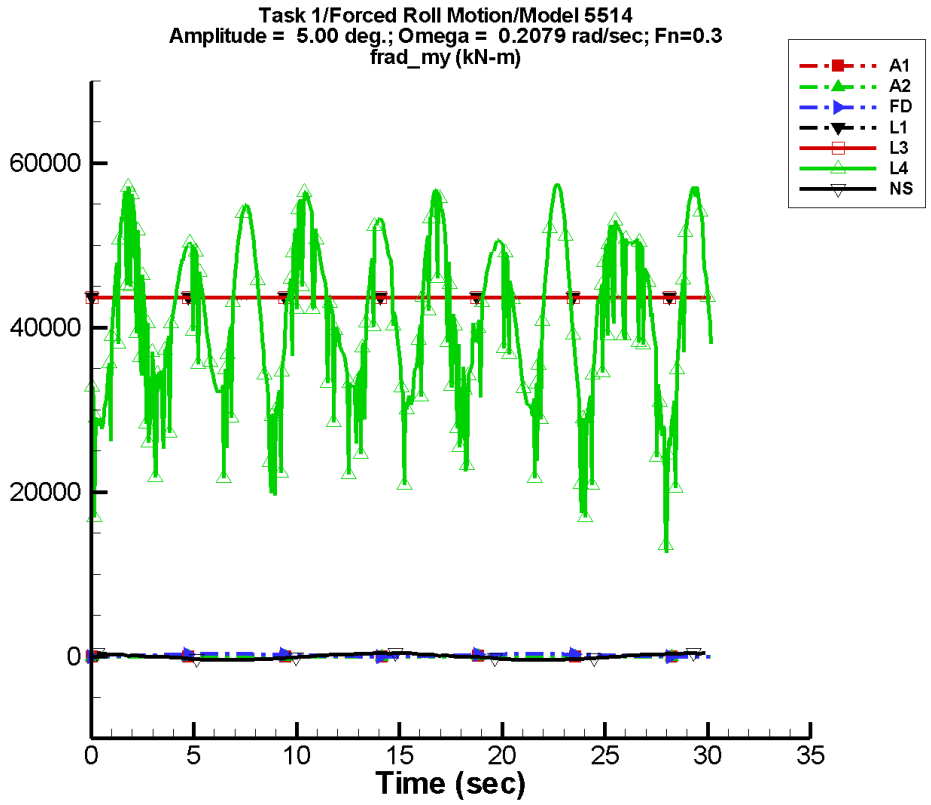
Figure D–525. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1049. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.129 | 36.6 | -116 | 0.227 | 134 |
| A2 | 0.129 | 36.6 | -116 | 0.227 | 134 |
| FD | 2.67E+05 | 1.32E+03 | -56 | 3.00E+05 | -123 |
| L1 | 5.17E+04 | 5.91 | -66 | 5.34E+04 | 83 |
| L3 | 5.17E+04 | 5.93 | -66 | 5.34E+04 | 83 |
| L4 | 3.94E+04 | 2.05E+04 | 150 | 9.89E+04 | 107 |
| NF | — | — | — | — | — |
| NS | -2.18E+03 | 1.30E+03 | -32 | 2.21E+05 | 86 |

Table D–1050. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -46.0 | 48.4 | -38.4 | 37.1 |
| A2 | -46.0 | 48.4 | -38.4 | 37.1 |
| FD | -4.81E+04 | 5.54E+05 | -3.27E+04 | 5.42E+05 |
| L1 | -1.70E+03 | 1.05E+05 | -816. | 1.05E+05 |
| L3 | -1.70E+03 | 1.05E+05 | -816. | 1.05E+05 |
| L4 | -1.86E+05 | 3.35E+05 | -1.36E+05 | 2.83E+05 |
| NF | — | — | — | — |
| NS | -4.61E+05 | 5.15E+05 | -2.97E+05 | 4.38E+05 |




Data identically zero, insufficient, or not available from NFA.

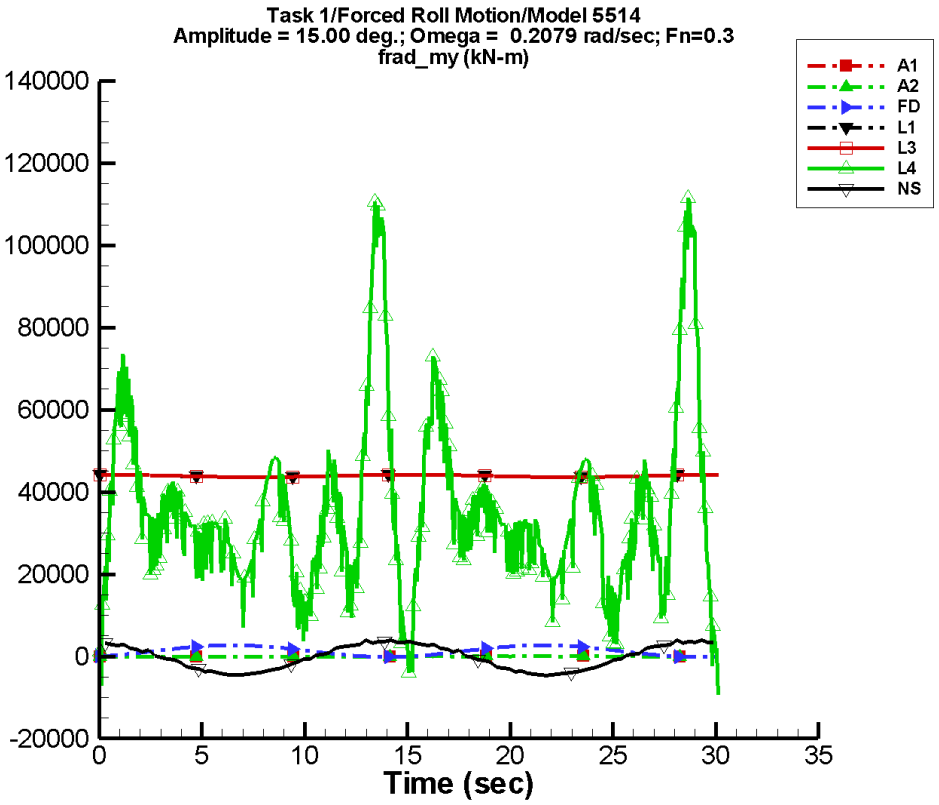
Figure D–526. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1051. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.91E-03 | 2.20 | -157 | 1.68E-02 | 86 |
| A2 | -9.91E-03 | 2.20 | -157 | 1.68E-02 | 86 |
| FD | 145. | 1.47E-03 | 103 | 160. | -65 |
| L1 | 4.36E+04 | 4.27 | -158 | 30.1 | 88 |
| L3 | 4.36E+04 | 3.31 | -146 | 30.5 | 88 |
| L4 | 4.12E+04 | 52.5 | -103 | 881. | -104 |
| NF | — | — | — | — | — |
| NS | -22.0 | 0.989 | 101 | 410. | 110 |

Table D–1052. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.14 | 4.08 | -3.10 | 3.06 |
| A2 | -4.14 | 4.08 | -3.10 | 3.06 |
| FD | -15.0 | 304. | -14.3 | 304. |
| L1 | 4.36E+04 | 4.37E+04 | 4.36E+04 | 4.37E+04 |
| L3 | 4.36E+04 | 4.37E+04 | 4.36E+04 | 4.37E+04 |
| L4 | 1.27E+04 | 5.75E+04 | 2.31E+04 | 5.67E+04 |
| NF | — | — | — | — |
| NS | -443. | 449. | -429. | 397. |




Data identically zero, insufficient, or not available from NFA.

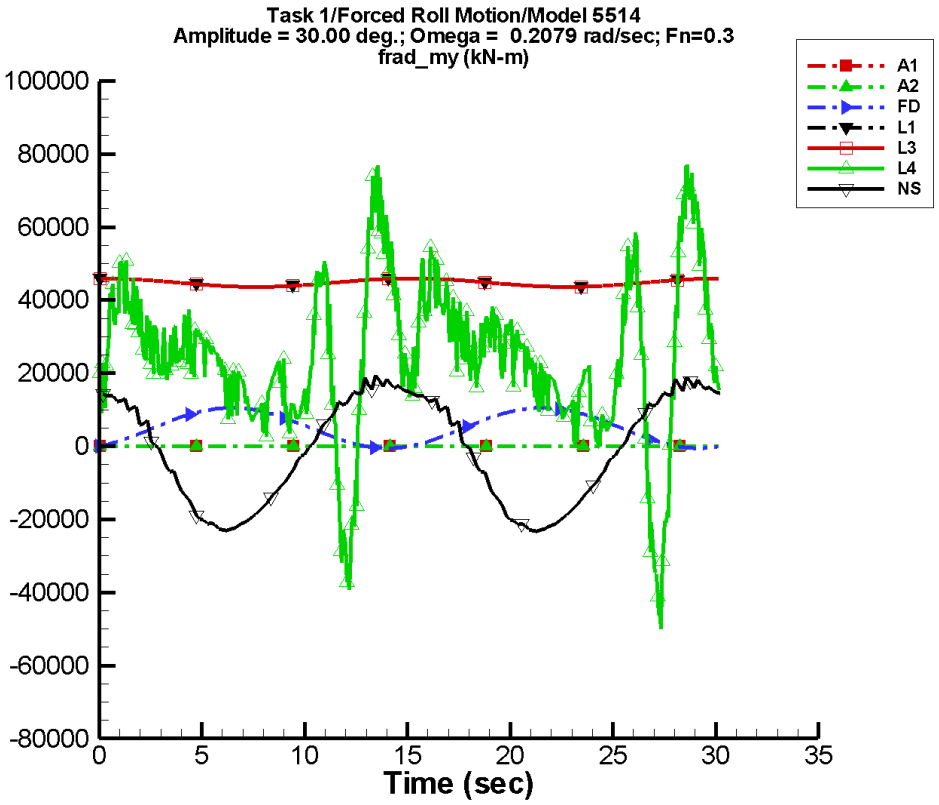
Figure D–527. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1053. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.97E-02 | 6.59 | -157 | 5.05E-02 | 86 |
| A2 | -2.97E-02 | 6.59 | -157 | 5.05E-02 | 86 |
| FD | 1.29E+03 | 0.120 | 102 | 1.42E+03 | -65 |
| L1 | 4.39E+04 | 4.35 | -158 | 290. | 88 |
| L3 | 4.39E+04 | 3.35 | -146 | 290. | 88 |
| L4 | 3.54E+04 | 339. | -126 | 1.03E+04 | 96 |
| NF | — | — | — | — | — |
| NS | -267. | 20.7 | 21 | 4.11E+03 | 110 |

Table D–1054. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -12.4 | 12.2 | -9.31 | 9.17 |
| A2 | -12.4 | 12.2 | -9.31 | 9.17 |
| FD | -135. | 2.71E+03 | -129. | 2.71E+03 |
| L1 | 4.36E+04 | 4.42E+04 | 4.36E+04 | 4.42E+04 |
| L3 | 4.36E+04 | 4.42E+04 | 4.36E+04 | 4.42E+04 |
| L4 | -9.34E+03 | 1.11E+05 | -1.74E+03 | 1.05E+05 |
| NF | — | — | — | — |
| NS | -4.71E+03 | 3.98E+03 | -4.44E+03 | 3.55E+03 |




Data identically zero, insufficient, or not available from NFA.

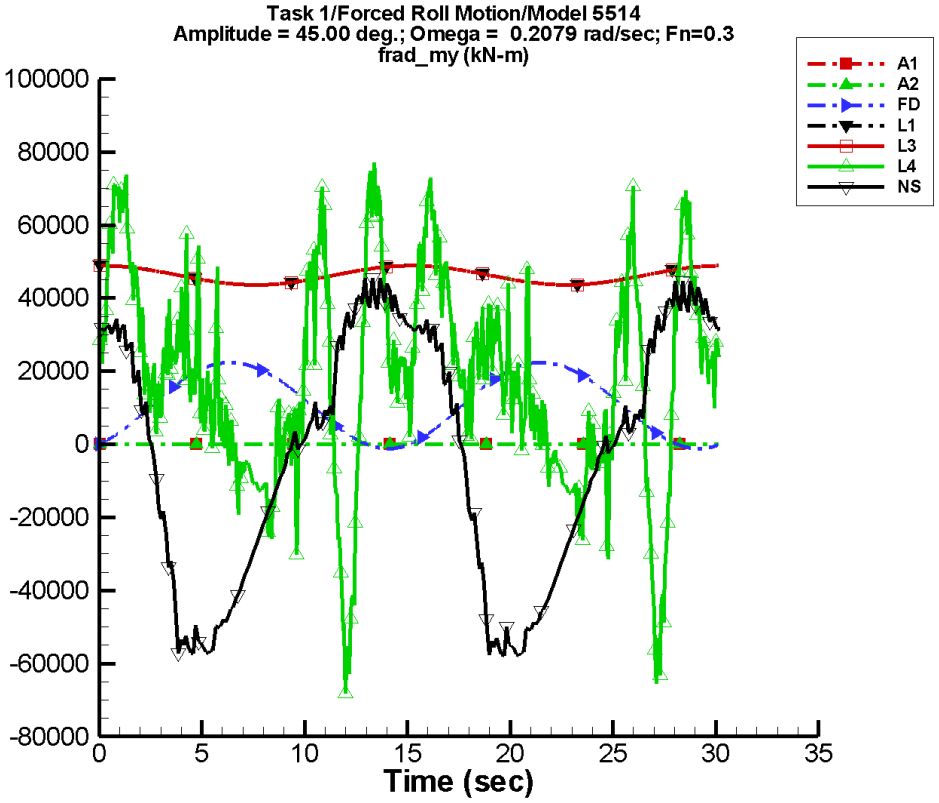
Figure D–528. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1055. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.95E-02 | 13.2 | -157 | 0.101 | 86 |
| A2 | -5.95E-02 | 13.2 | -157 | 0.101 | 86 |
| FD | 5.04E+03 | 1.90 | 102 | 5.52E+03 | -64 |
| L1 | 4.48E+04 | 4.47 | -159 | 1.17E+03 | 88 |
| L3 | 4.48E+04 | 3.47 | -148 | 1.17E+03 | 88 |
| L4 | 2.38E+04 | 339. | -157 | 1.23E+04 | 55 |
| NF | — | — | — | — | — |
| NS | -1.42E+03 | 76.0 | 34 | 2.02E+04 | 116 |

Table D–1056. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -24.8 | 24.5 | -18.6 | 18.3 |
| A2 | -24.8 | 24.5 | -18.6 | 18.3 |
| FD | -539. | 1.05E+04 | -514. | 1.05E+04 |
| L1 | 4.36E+04 | 4.60E+04 | 4.36E+04 | 4.59E+04 |
| L3 | 4.36E+04 | 4.60E+04 | 4.36E+04 | 4.59E+04 |
| L4 | -5.30E+04 | 7.86E+04 | -4.21E+04 | 7.26E+04 |
| NF | — | — | — | — |
| NS | -2.39E+04 | 1.93E+04 | -2.31E+04 | 1.73E+04 |




Data identically zero, insufficient, or not available from NFA.

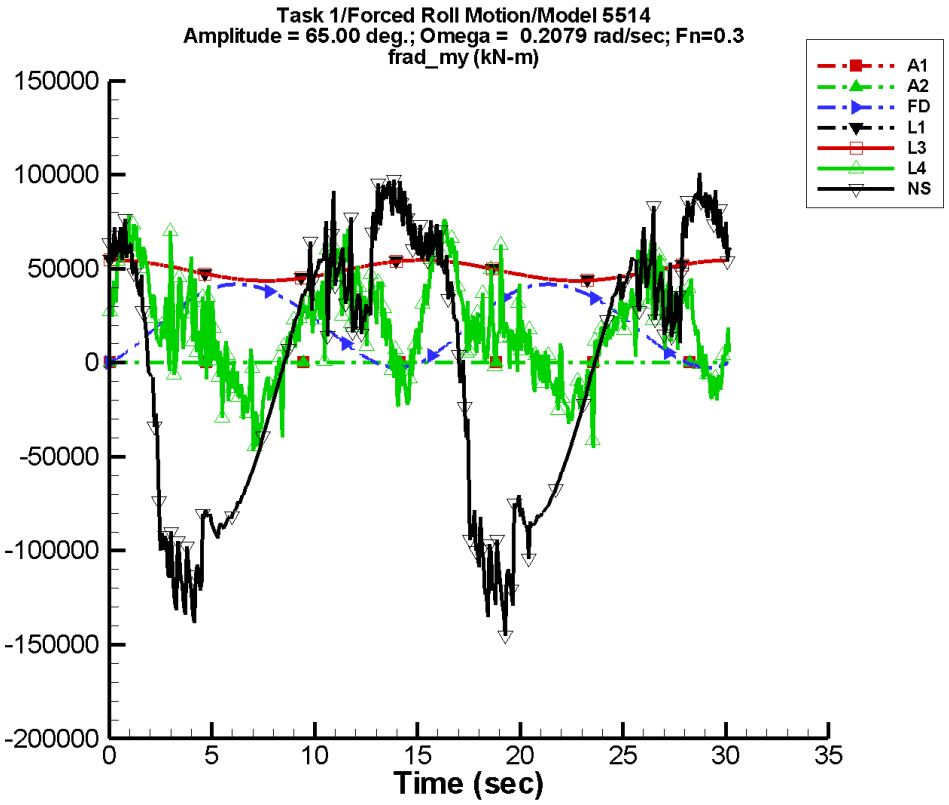
Figure D–529. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1057. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.92E-02 | 19.8 | -157 | 0.151 | 86 |
| A2 | -8.92E-02 | 19.8 | -157 | 0.151 | 86 |
| FD | 1.09E+04 | 9.49 | 102 | 1.18E+04 | -64 |
| L1 | 4.63E+04 | 4.54 | -159 | 2.63E+03 | 88 |
| L3 | 4.63E+04 | 3.64 | -149 | 2.63E+03 | 88 |
| L4 | 1.78E+04 | 798. | 51 | 2.11E+04 | 69 |
| NF | — | — | — | — | — |
| NS | -3.32E+03 | 232. | 31 | 4.62E+04 | 128 |

Table D–1058. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -37.2 | 36.7 | -27.9 | 27.5 |
| A2 | -37.2 | 36.7 | -27.9 | 27.5 |
| FD | -1.21E+03 | 2.24E+04 | -1.15E+03 | 2.23E+04 |
| L1 | 4.36E+04 | 4.89E+04 | 4.36E+04 | 4.89E+04 |
| L3 | 4.36E+04 | 4.89E+04 | 4.36E+04 | 4.89E+04 |
| L4 | -6.82E+04 | 7.71E+04 | -5.43E+04 | 7.05E+04 |
| NF | — | — | — | — |
| NS | -5.96E+04 | 4.55E+04 | -5.75E+04 | 4.15E+04 |




Data identically zero, insufficient, or not available from NFA.

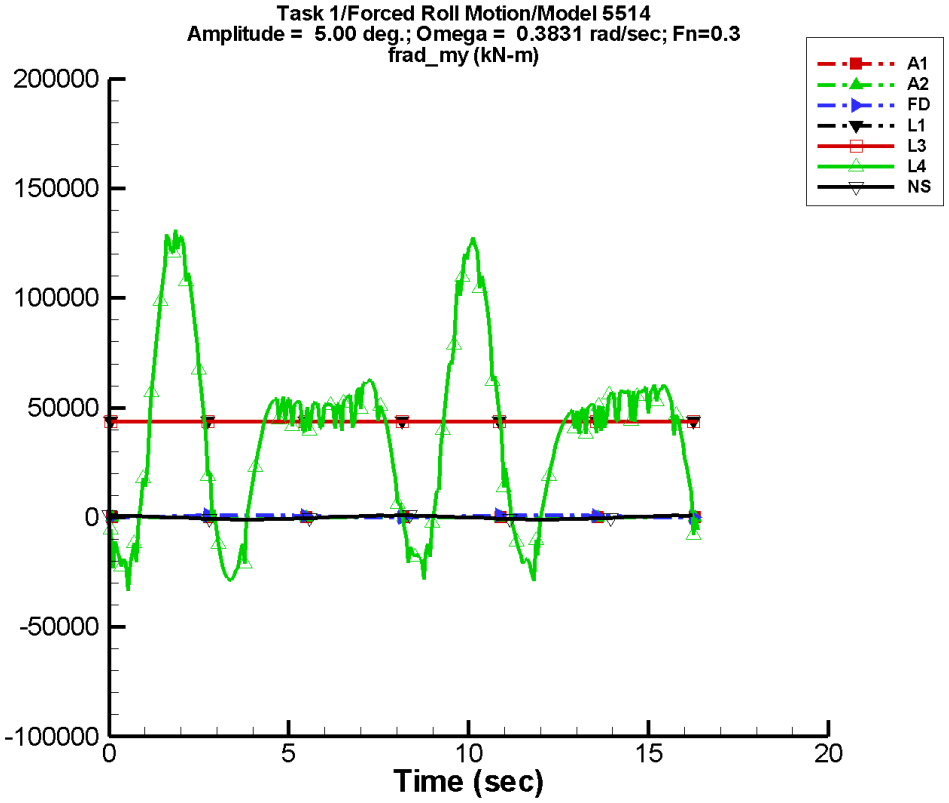
Figure D–530. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1059. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.129 | 28.5 | -157 | 0.219 | 86 |
| A2 | -0.129 | 28.5 | -157 | 0.219 | 86 |
| FD | 2.08E+04 | 40.0 | 103 | 2.21E+04 | -62 |
| L1 | 4.91E+04 | 4.57 | -159 | 5.49E+03 | 88 |
| L3 | 4.91E+04 | 3.68 | -149 | 5.49E+03 | 88 |
| L4 | 2.03E+04 | 1.45E+03 | 22 | 2.29E+04 | 106 |
| NF | — | — | — | — | — |
| NS | -3.50E+03 | 560. | -144 | 8.83E+04 | 147 |

Table D–1060. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -53.8 | 53.0 | -40.3 | 39.8 |
| A2 | -53.8 | 53.0 | -40.3 | 39.8 |
| FD | -2.51E+03 | 4.17E+04 | -2.39E+03 | 4.17E+04 |
| L1 | 4.36E+04 | 5.46E+04 | 4.36E+04 | 5.46E+04 |
| L3 | 4.36E+04 | 5.46E+04 | 4.36E+04 | 5.46E+04 |
| L4 | -4.64E+04 | 8.08E+04 | -3.31E+04 | 7.00E+04 |
| NF | — | — | — | — |
| NS | -1.47E+05 | 1.02E+05 | -1.24E+05 | 8.92E+04 |




Data identically zero, insufficient, or not available from NFA.

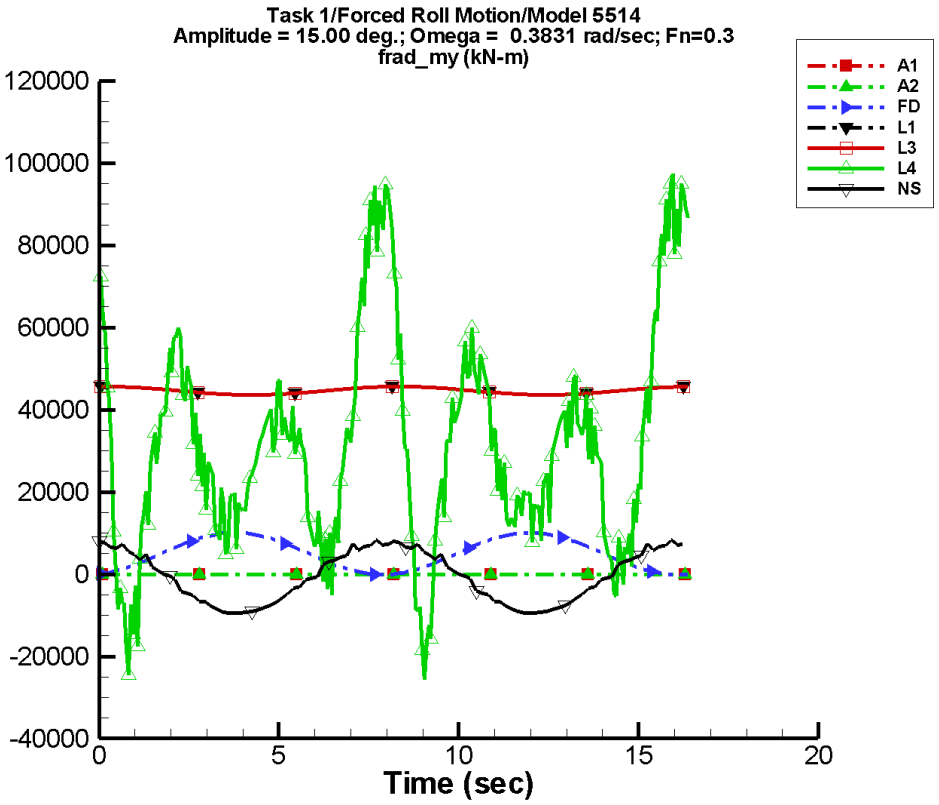
Figure D–531. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1061. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 3.21E-02 | 1.85 | -161 | 0.145 | 166 |
| A2 | 3.21E-02 | 1.85 | -161 | 0.145 | 166 |
| FD | 557. | 8.73E-03 | -46 | 574. | -76 |
| L1 | 4.37E+04 | 1.19 | 107 | 113. | 83 |
| L3 | 4.37E+04 | 1.32 | 123 | 113. | 83 |
| L4 | 3.97E+04 | 3.93E+03 | -7 | 8.05E+03 | -21 |
| NF | — | — | — | — | — |
| NS | -58.9 | 1.63 | -30 | 892. | 98 |

Table D–1062. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.00 | 1.98 | -1.91 | 1.88 |
| A2 | -3.00 | 1.98 | -1.91 | 1.88 |
| FD | -16.9 | 1.13E+03 | -8.32 | 1.12E+03 |
| L1 | 4.36E+04 | 4.38E+04 | 4.36E+04 | 4.38E+04 |
| L3 | 4.36E+04 | 4.38E+04 | 4.36E+04 | 4.38E+04 |
| L4 | -3.75E+04 | 1.45E+05 | -2.91E+04 | 1.34E+05 |
| NF | — | — | — | — |
| NS | -964. | 982. | -930. | 881. |




Data identically zero, insufficient, or not available from NFA.

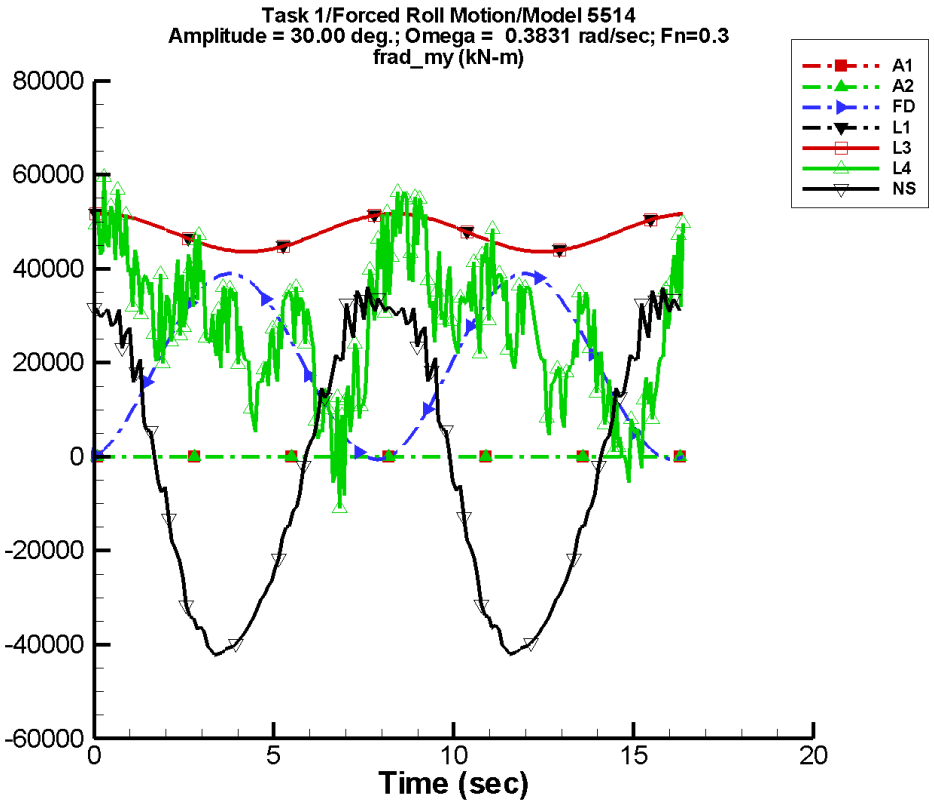
Figure D–532. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1063. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 9.62E-02 | 5.54 | -161 | 0.435 | 166 |
| A2 | 9.62E-02 | 5.54 | -161 | 0.435 | 166 |
| FD | 4.98E+03 | 0.685 | -47 | 5.11E+03 | -76 |
| L1 | 4.46E+04 | 1.13 | 107 | 1.01E+03 | 83 |
| L3 | 4.46E+04 | 1.28 | 129 | 1.01E+03 | 83 |
| L4 | 3.11E+04 | 2.53E+03 | -96 | 8.36E+03 | 113 |
| NF | — | — | — | — | — |
| NS | -615. | 22.1 | -25 | 8.65E+03 | 98 |

Table D–1064. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.99 | 5.93 | -5.73 | 5.63 |
| A2 | -8.99 | 5.93 | -5.73 | 5.63 |
| FD | -152. | 1.01E+04 | -74.9 | 1.00E+04 |
| L1 | 4.36E+04 | 4.56E+04 | 4.36E+04 | 4.56E+04 |
| L3 | 4.36E+04 | 4.56E+04 | 4.36E+04 | 4.56E+04 |
| L4 | -2.57E+04 | 9.74E+04 | -1.35E+04 | 8.91E+04 |
| NF | — | — | — | — |
| NS | -9.63E+03 | 8.33E+03 | -9.25E+03 | 7.53E+03 |




Data identically zero, insufficient, or not available from NFA.

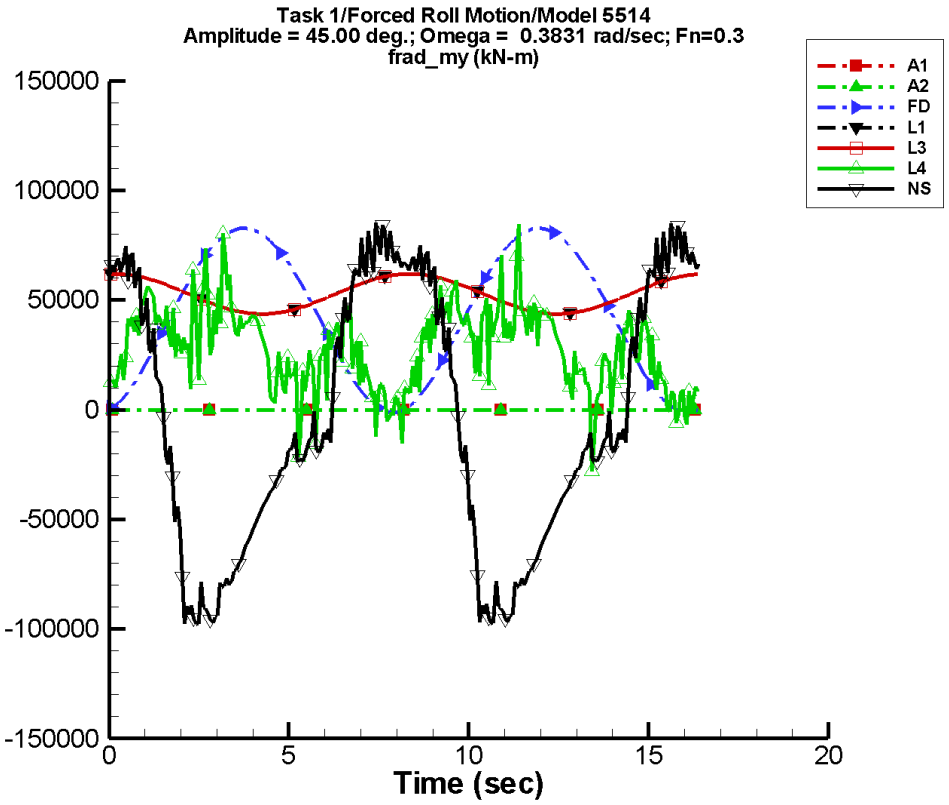
Figure D–533. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1065. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.192 | 11.1 | -161 | 0.871 | 166 |
| A2 | 0.192 | 11.1 | -161 | 0.871 | 166 |
| FD | 1.94E+04 | 10.8 | -47 | 1.98E+04 | -76 |
| L1 | 4.77E+04 | 1.06 | 110 | 4.05E+03 | 83 |
| L3 | 4.77E+04 | 1.40 | 139 | 4.05E+03 | 83 |
| L4 | 2.81E+04 | 394. | -46 | 1.28E+04 | 27 |
| NF | — | — | — | — | — |
| NS | -3.07E+03 | 150. | -18 | 3.84E+04 | 104 |

Table D–1066. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -18.0 | 11.9 | -11.5 | 11.3 |
| A2 | -18.0 | 11.9 | -11.5 | 11.3 |
| FD | -607. | 3.90E+04 | -299. | 3.87E+04 |
| L1 | 4.36E+04 | 5.17E+04 | 4.37E+04 | 5.17E+04 |
| L3 | 4.36E+04 | 5.17E+04 | 4.37E+04 | 5.17E+04 |
| L4 | -1.09E+04 | 5.96E+04 | 1.63E+03 | 5.22E+04 |
| NF | — | — | — | — |
| NS | -4.30E+04 | 3.61E+04 | -4.18E+04 | 3.26E+04 |




Data identically zero, insufficient, or not available from NFA.

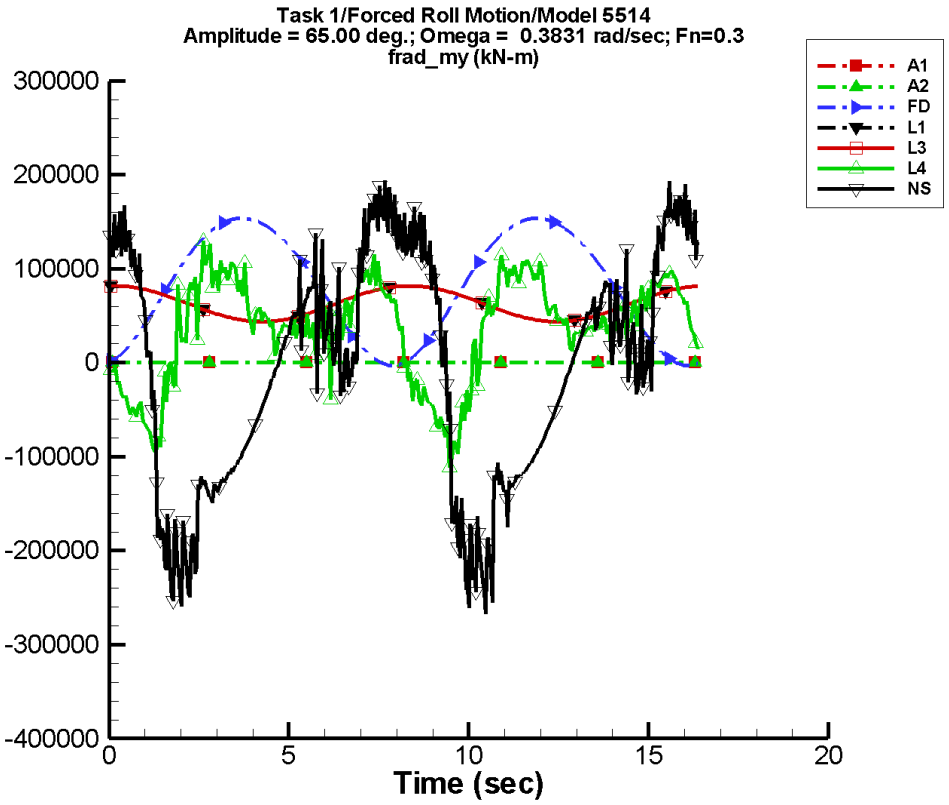
Figure D–534. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1067. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.289 | 16.6 | -161 | 1.31 | 166 |
| A2 | 0.289 | 16.6 | -161 | 1.31 | 166 |
| FD | 4.18E+04 | 53.0 | -46 | 4.20E+04 | -75 |
| L1 | 5.28E+04 | 0.924 | 112 | 9.12E+03 | 83 |
| L3 | 5.28E+04 | 1.39 | 147 | 9.12E+03 | 83 |
| L4 | 2.81E+04 | 922. | 78 | 1.54E+04 | -21 |
| NF | — | — | — | — | — |
| NS | -5.69E+03 | 525. | -12 | 7.86E+04 | 116 |

Table D–1068. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -27.0 | 17.8 | -17.2 | 16.9 |
| A2 | -27.0 | 17.8 | -17.2 | 16.9 |
| FD | -1.36E+03 | 8.27E+04 | -672. | 8.22E+04 |
| L1 | 4.37E+04 | 6.19E+04 | 4.37E+04 | 6.19E+04 |
| L3 | 4.37E+04 | 6.19E+04 | 4.37E+04 | 6.19E+04 |
| L4 | -2.79E+04 | 8.46E+04 | 183. | 5.46E+04 |
| NF | — | — | — | — |
| NS | -1.00E+05 | 8.53E+04 | -9.54E+04 | 7.63E+04 |




Data identically zero, insufficient, or not available from NFA.

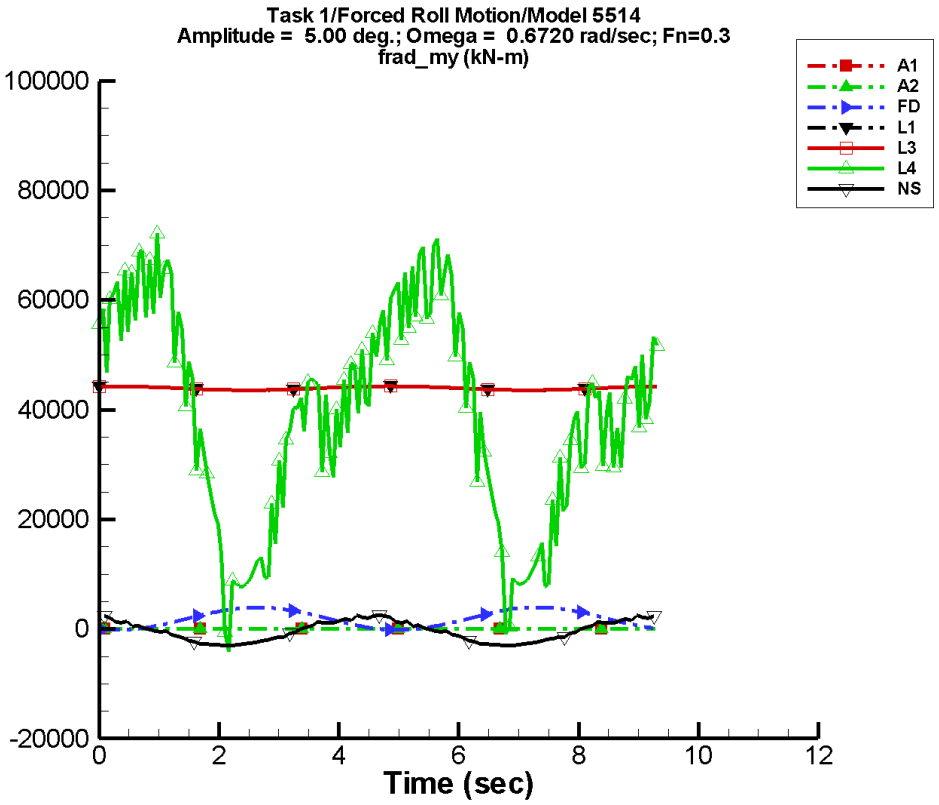
Figure D–535. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1069. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | 0.417 | 24.0 | -161 | 1.89 | 166 |
| A2 | 0.417 | 24.0 | -161 | 1.89 | 166 |
| FD | 8.00E+04 | 218. | -46 | 7.77E+04 | -74 |
| L1 | 6.28E+04 | 0.798 | 114 | 1.90E+04 | 83 |
| L3 | 6.28E+04 | 1.51 | 157 | 1.90E+04 | 83 |
| L4 | 3.29E+04 | 2.13E+03 | -120 | 4.41E+04 | -124 |
| NF | — | — | — | — | — |
| NS | -9.15E+03 | 1.19E+03 | -59 | 1.41E+05 | 141 |

Table D–1070. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -39.0 | 25.7 | -24.8 | 24.4 |
| A2 | -39.0 | 25.7 | -24.8 | 24.4 |
| FD | -2.84E+03 | 1.54E+05 | -1.40E+03 | 1.53E+05 |
| L1 | 4.37E+04 | 8.18E+04 | 4.39E+04 | 8.18E+04 |
| L3 | 4.37E+04 | 8.18E+04 | 4.39E+04 | 8.18E+04 |
| L4 | -1.11E+05 | 1.29E+05 | -8.57E+04 | 1.02E+05 |
| NF | — | — | — | — |
| NS | -2.72E+05 | 1.94E+05 | -2.25E+05 | 1.66E+05 |




Data identically zero, insufficient, or not available from NFA.

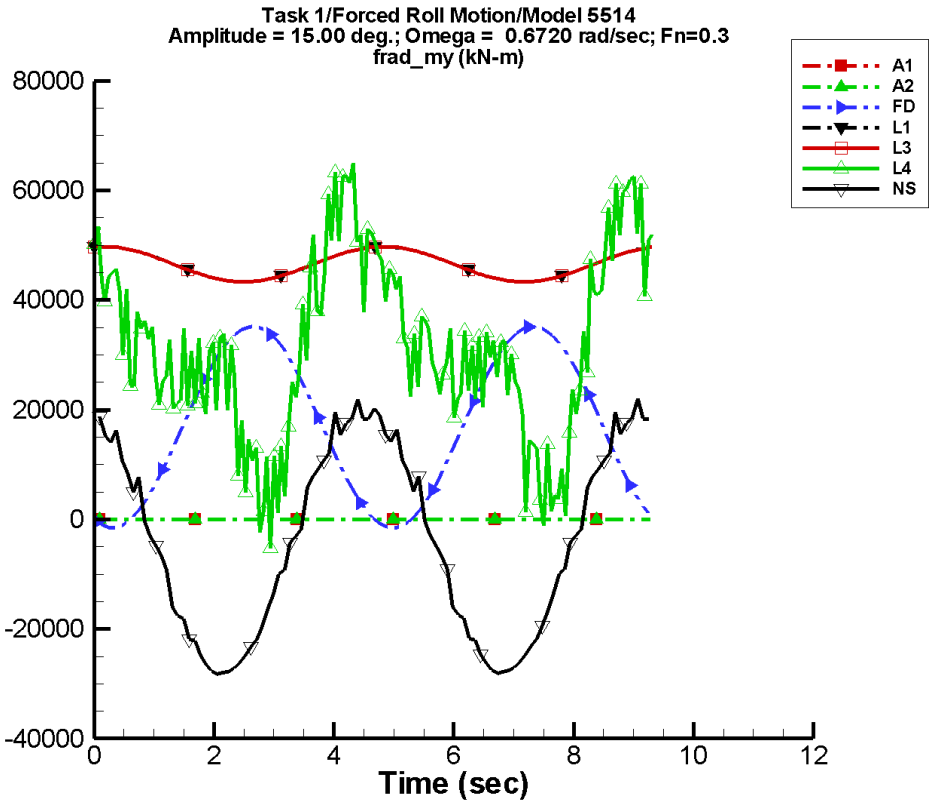
Figure D–536. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1071. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -9.01E-03 | 3.49 | 142 | 1.25E-02 | 39 |
| A2 | -9.01E-03 | 3.49 | 142 | 1.25E-02 | 39 |
| FD | 1.89E+03 | 4.73E-02 | -61 | 2.06E+03 | -114 |
| L1 | 4.39E+04 | 1.07 | 162 | 358. | 78 |
| L3 | 4.39E+04 | 0.921 | 170 | 358. | 78 |
| L4 | 3.93E+04 | 869. | -7 | 2.36E+04 | 59 |
| NF | — | — | — | — | — |
| NS | -388. | 2.34 | -96 | 2.57E+03 | 105 |

Table D–1072. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.37 | 3.33 | -3.33 | 3.26 |
| A2 | -3.37 | 3.33 | -3.33 | 3.26 |
| FD | -176. | 3.95E+03 | -125. | 3.91E+03 |
| L1 | 4.36E+04 | 4.43E+04 | 4.36E+04 | 4.43E+04 |
| L3 | 4.36E+04 | 4.43E+04 | 4.36E+04 | 4.43E+04 |
| L4 | -4.14E+03 | 7.21E+04 | 6.73E+03 | 6.49E+04 |
| NF | — | — | — | — |
| NS | -2.99E+03 | 2.49E+03 | -2.90E+03 | 2.23E+03 |




Data identically zero, insufficient, or not available from NFA.

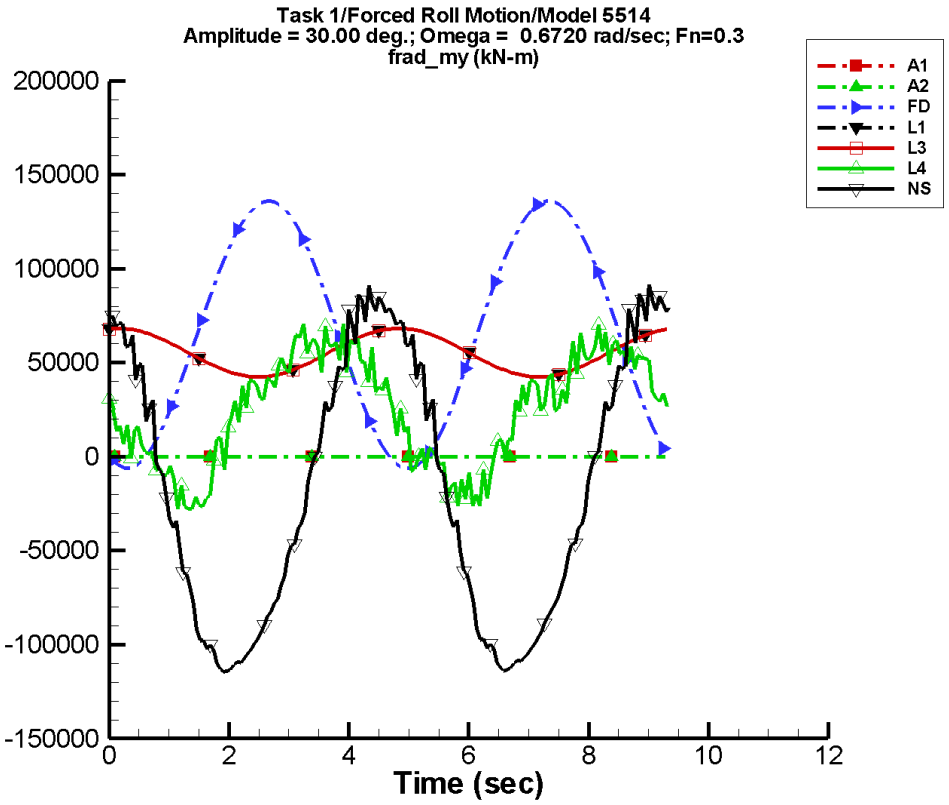
Figure D–537. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1073. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.70E-02 | 10.5 | 142 | 3.76E-02 | 39 |
| A2 | -2.70E-02 | 10.5 | 142 | 3.76E-02 | 39 |
| FD | 1.68E+04 | 3.88 | -51 | 1.84E+04 | -114 |
| L1 | 4.65E+04 | 1.49 | 179 | 3.22E+03 | 78 |
| L3 | 4.65E+04 | 1.38 | 167 | 3.22E+03 | 78 |
| L4 | 3.12E+04 | 1.20E+03 | -122 | 1.68E+04 | 96 |
| NF | — | — | — | — | — |
| NS | -3.82E+03 | 19.5 | -87 | 2.39E+04 | 104 |

Table D–1074. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -10.1 | 9.98 | -9.99 | 9.79 |
| A2 | -10.1 | 9.98 | -9.99 | 9.79 |
| FD | -1.58E+03 | 3.52E+04 | -1.13E+03 | 3.49E+04 |
| L1 | 4.33E+04 | 4.98E+04 | 4.34E+04 | 4.98E+04 |
| L3 | 4.33E+04 | 4.98E+04 | 4.34E+04 | 4.98E+04 |
| L4 | -5.18E+03 | 6.49E+04 | 4.94E+03 | 5.80E+04 |
| NF | — | — | — | — |
| NS | -2.82E+04 | 2.20E+04 | -2.71E+04 | 1.88E+04 |




Data identically zero, insufficient, or not available from NFA.

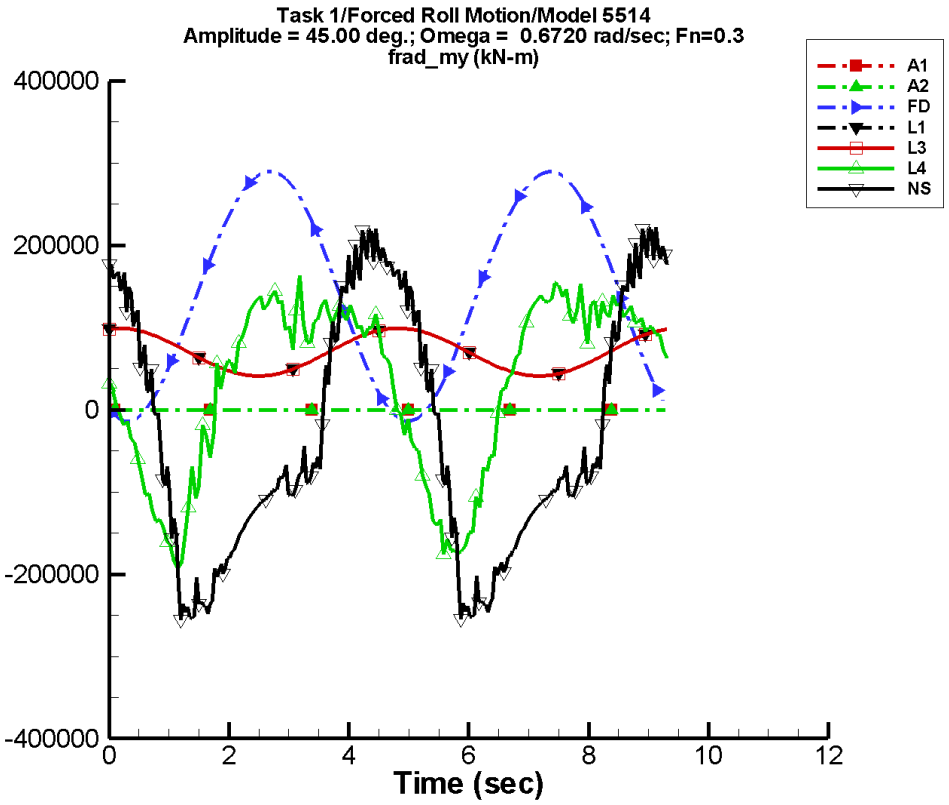
Figure D–538. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1075. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.40E-02 | 20.9 | 142 | 7.52E-02 | 39 |
| A2 | -5.40E-02 | 20.9 | 142 | 7.52E-02 | 39 |
| FD | 6.56E+04 | 61.4 | -50 | 7.12E+04 | -114 |
| L1 | 5.53E+04 | 2.27 | -161 | 1.29E+04 | 78 |
| L3 | 5.53E+04 | 1.85 | 177 | 1.29E+04 | 78 |
| L4 | 2.42E+04 | 1.81E+03 | -69 | 3.88E+04 | 177 |
| NF | — | — | — | — | — |
| NS | -1.67E+04 | 125. | -49 | 9.86E+04 | 107 |

Table D–1076. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -20.2 | 20.0 | -20.0 | 19.6 |
| A2 | -20.2 | 20.0 | -20.0 | 19.6 |
| FD | -6.32E+03 | 1.36E+05 | -4.47E+03 | 1.35E+05 |
| L1 | 4.24E+04 | 6.82E+04 | 4.26E+04 | 6.82E+04 |
| L3 | 4.24E+04 | 6.82E+04 | 4.26E+04 | 6.82E+04 |
| L4 | -2.78E+04 | 7.06E+04 | -2.44E+04 | 6.09E+04 |
| NF | — | — | — | — |
| NS | -1.15E+05 | 9.14E+04 | -1.11E+05 | 8.20E+04 |




Data identically zero, insufficient, or not available from NFA.

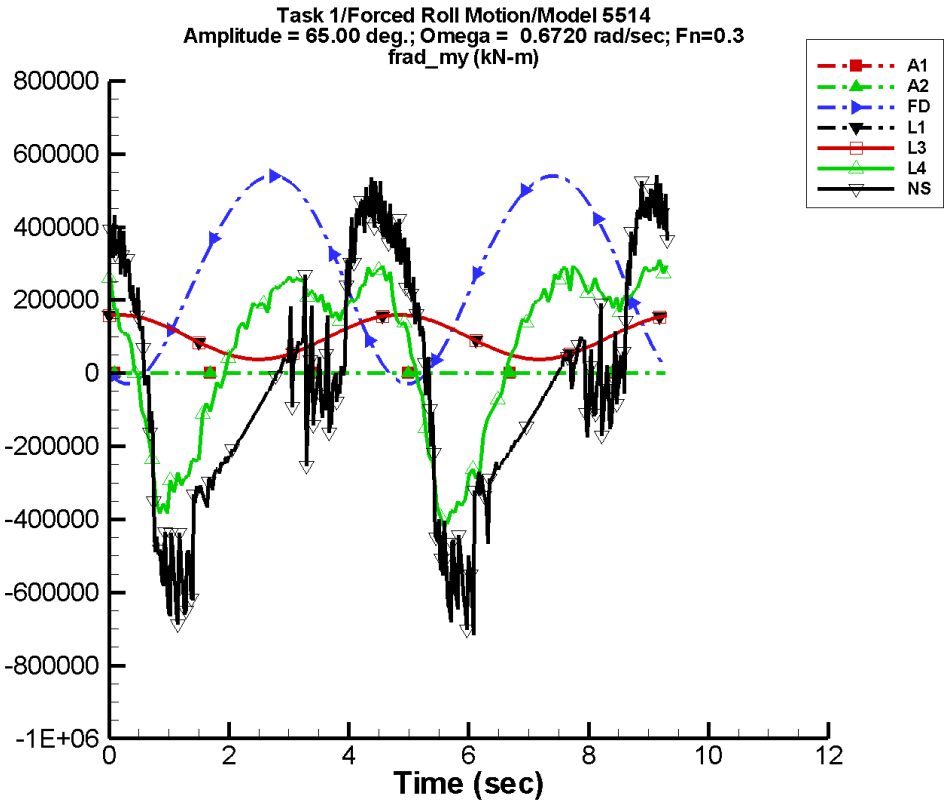
Figure D–539. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1077. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.10E-02 | 31.4 | 142 | 0.113 | 39 |
| A2 | -8.10E-02 | 31.4 | 142 | 0.113 | 39 |
| FD | 1.41E+05 | 303. | -50 | 1.52E+05 | -115 |
| L1 | 6.99E+04 | 3.35 | -154 | 2.90E+04 | 78 |
| L3 | 6.99E+04 | 2.36 | 179 | 2.90E+04 | 78 |
| L4 | 2.86E+04 | 2.53E+03 | 145 | 1.41E+05 | -168 |
| NF | — | — | — | — | — |
| NS | -2.90E+04 | 336. | -33 | 1.97E+05 | 115 |

Table D–1078. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -30.3 | 29.9 | -30.0 | 29.4 |
| A2 | -30.3 | 29.9 | -30.0 | 29.4 |
| FD | -1.42E+04 | 2.90E+05 | -9.95E+03 | 2.87E+05 |
| L1 | 4.10E+04 | 9.89E+04 | 4.14E+04 | 9.90E+04 |
| L3 | 4.10E+04 | 9.89E+04 | 4.14E+04 | 9.90E+04 |
| L4 | -1.95E+05 | 1.63E+05 | -1.68E+05 | 1.40E+05 |
| NF | — | — | — | — |
| NS | -2.56E+05 | 2.22E+05 | -2.43E+05 | 2.03E+05 |




Data identically zero, insufficient, or not available from NFA.

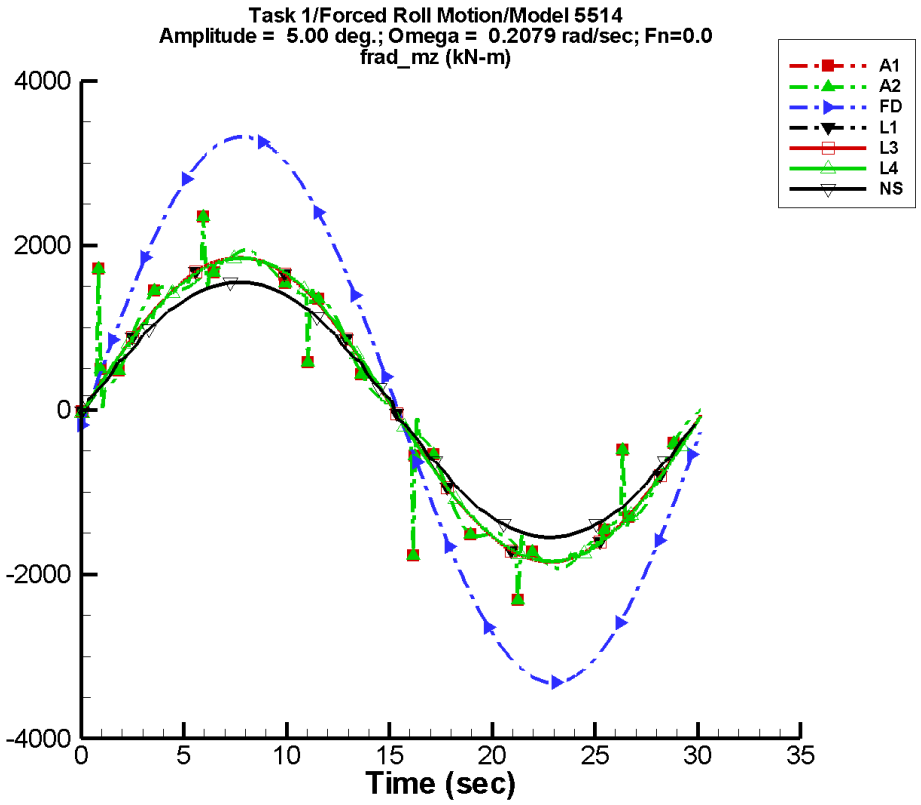
Figure D–540. Time history of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1079. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -0.117 | 45.3 | 142 | 0.163 | 39 |
| A2 | -0.117 | 45.3 | 142 | 0.163 | 39 |
| FD | 2.70E+05 | 1.26E+03 | -50 | 2.84E+05 | -116 |
| L1 | 9.86E+04 | 4.57 | -151 | 6.05E+04 | 78 |
| L3 | 9.86E+04 | 3.26 | 179 | 6.05E+04 | 78 |
| L4 | 6.24E+04 | 1.28E+04 | 121 | 2.75E+05 | 177 |
| NF | — | — | — | — | — |
| NS | -3.98E+04 | 1.37E+03 | -55 | 3.38E+05 | 136 |

Table D–1080. Minimum and maximum of of $M_y^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -43.8 | 43.3 | -43.3 | 42.4 |
| A2 | -43.8 | 43.3 | -43.3 | 42.4 |
| FD | -2.94E+04 | 5.40E+05 | -2.03E+04 | 5.32E+05 |
| L1 | 3.81E+04 | 1.59E+05 | 3.91E+04 | 1.59E+05 |
| L3 | 3.81E+04 | 1.59E+05 | 3.91E+04 | 1.59E+05 |
| L4 | -4.20E+05 | 3.10E+05 | -3.80E+05 | 2.82E+05 |
| NF | — | — | — | — |
| NS | -7.16E+05 | 5.43E+05 | -5.93E+05 | 4.72E+05 |




Data identically zero, insufficient, or not available from NFA.

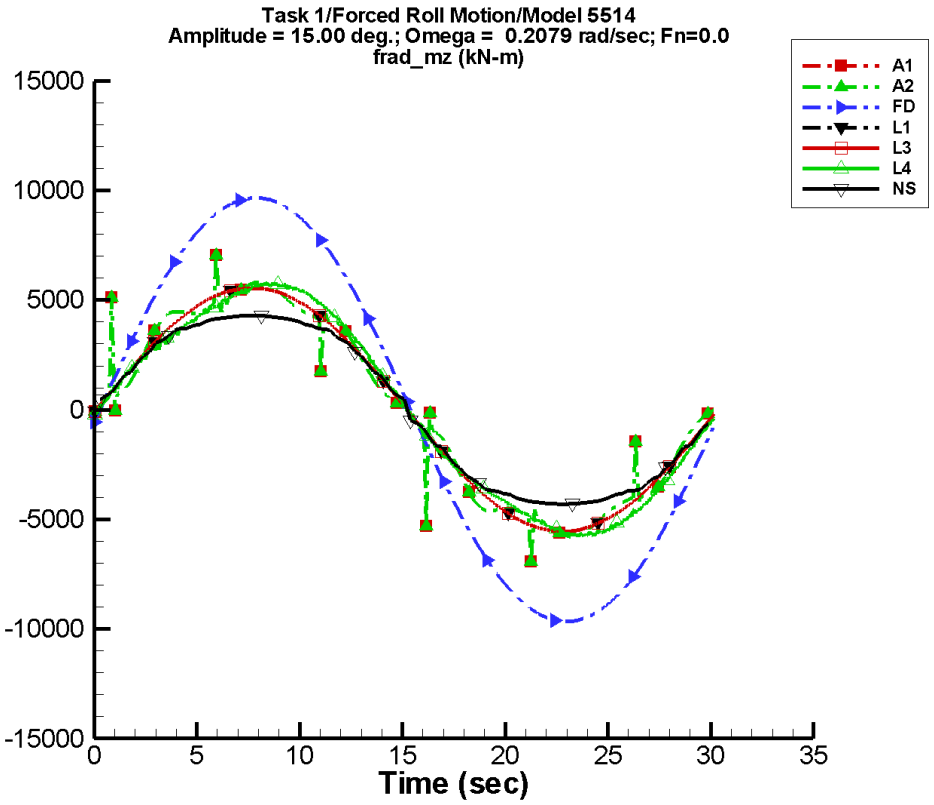
Figure D–541. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1081. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -2.97 | 1.83E+03 | 0 | 1.84 | 23 |
| A2 | -2.97 | 1.83E+03 | 0 | 1.84 | 23 |
| FD | 9.84E-02 | 3.32E+03 | -4 | 0.456 | 54 |
| L1 | 7.04E-02 | 1.85E+03 | -1 | 0.154 | 86 |
| L3 | 7.04E-02 | 1.85E+03 | -1 | 0.154 | 86 |
| L4 | -0.410 | 1.85E+03 | -2 | 6.06 | 180 |
| NF | — | — | — | — | — |
| NS | -7.73E-03 | 1.57E+03 | -2 | 4.57E-02 | -26 |

Table D–1082. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.32E+03 | 2.34E+03 | -1.92E+03 | 1.93E+03 |
| A2 | -2.32E+03 | 2.34E+03 | -1.92E+03 | 1.93E+03 |
| FD | -3.32E+03 | 3.32E+03 | -3.32E+03 | 3.32E+03 |
| L1 | -1.85E+03 | 1.85E+03 | -1.85E+03 | 1.85E+03 |
| L3 | -1.85E+03 | 1.85E+03 | -1.85E+03 | 1.85E+03 |
| L4 | -1.84E+03 | 1.84E+03 | -1.84E+03 | 1.84E+03 |
| NF | — | — | — | — |
| NS | -1.55E+03 | 1.55E+03 | -1.54E+03 | 1.54E+03 |




Data identically zero, insufficient, or not available from NFA.

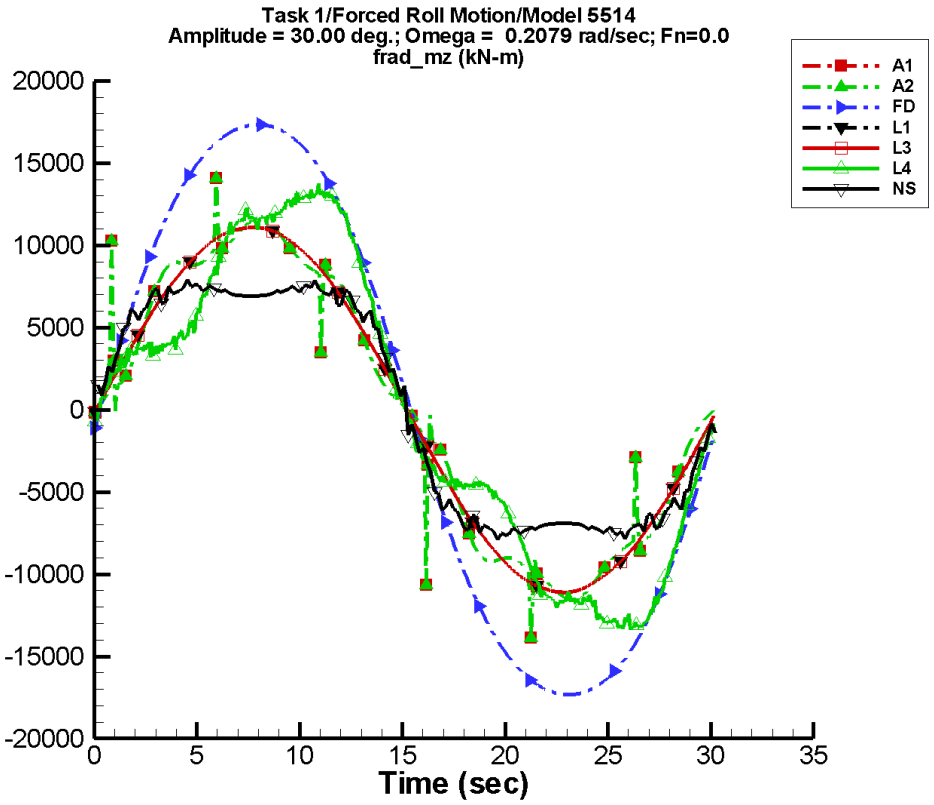
Figure D–542. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1083. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -8.90 | 5.50E+03 | 0 | 5.53 | 23 |
| A2 | -8.90 | 5.50E+03 | 0 | 5.53 | 23 |
| FD | 2.65 | 9.74E+03 | -4 | 12.2 | 54 |
| L1 | 0.212 | 5.55E+03 | -1 | 0.464 | 87 |
| L3 | 0.211 | 5.55E+03 | -1 | 0.465 | 87 |
| L4 | -8.30 | 5.64E+03 | -5 | 94.0 | 162 |
| NF | — | — | — | — | — |
| NS | -3.02E-03 | 4.61E+03 | -2 | 0.273 | -5 |

Table D–1084. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.95E+03 | 7.03E+03 | -5.75E+03 | 5.79E+03 |
| A2 | -6.95E+03 | 7.03E+03 | -5.75E+03 | 5.79E+03 |
| FD | -9.66E+03 | 9.66E+03 | -9.65E+03 | 9.65E+03 |
| L1 | -5.55E+03 | 5.56E+03 | -5.55E+03 | 5.56E+03 |
| L3 | -5.55E+03 | 5.56E+03 | -5.55E+03 | 5.56E+03 |
| L4 | -5.74E+03 | 5.75E+03 | -5.72E+03 | 5.73E+03 |
| NF | — | — | — | — |
| NS | -4.30E+03 | 4.30E+03 | -4.28E+03 | 4.28E+03 |




Data identically zero, insufficient, or not available from NFA.

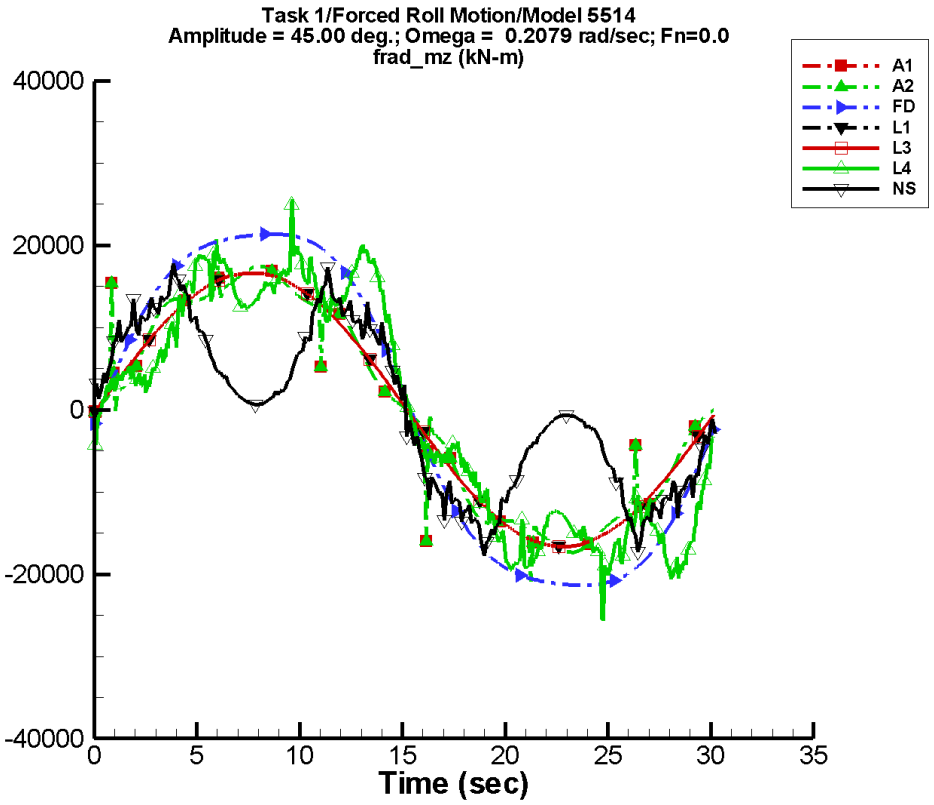
Figure D–543. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1085. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -17.8 | 1.10E+04 | 0 | 11.1 | 23 |
| A2 | -17.8 | 1.10E+04 | 0 | 11.1 | 23 |
| FD | 20.8 | 1.80E+04 | -4 | 96.0 | 54 |
| L1 | 0.423 | 1.11E+04 | -1 | 0.931 | 87 |
| L3 | 0.423 | 1.11E+04 | -1 | 0.930 | 87 |
| L4 | 16.9 | 1.22E+04 | -14 | 615. | 152 |
| NF | — | — | — | — | — |
| NS | 0.204 | 8.74E+03 | -1 | 0.539 | 16 |

Table D–1086. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.39E+04 | 1.41E+04 | -1.15E+04 | 1.16E+04 |
| A2 | -1.39E+04 | 1.41E+04 | -1.15E+04 | 1.16E+04 |
| FD | -1.73E+04 | 1.73E+04 | -1.73E+04 | 1.73E+04 |
| L1 | -1.11E+04 | 1.11E+04 | -1.11E+04 | 1.11E+04 |
| L3 | -1.11E+04 | 1.11E+04 | -1.11E+04 | 1.11E+04 |
| L4 | -1.34E+04 | 1.37E+04 | -1.32E+04 | 1.32E+04 |
| NF | — | — | — | — |
| NS | -7.93E+03 | 7.93E+03 | -7.49E+03 | 7.49E+03 |




Data identically zero, insufficient, or not available from NFA.

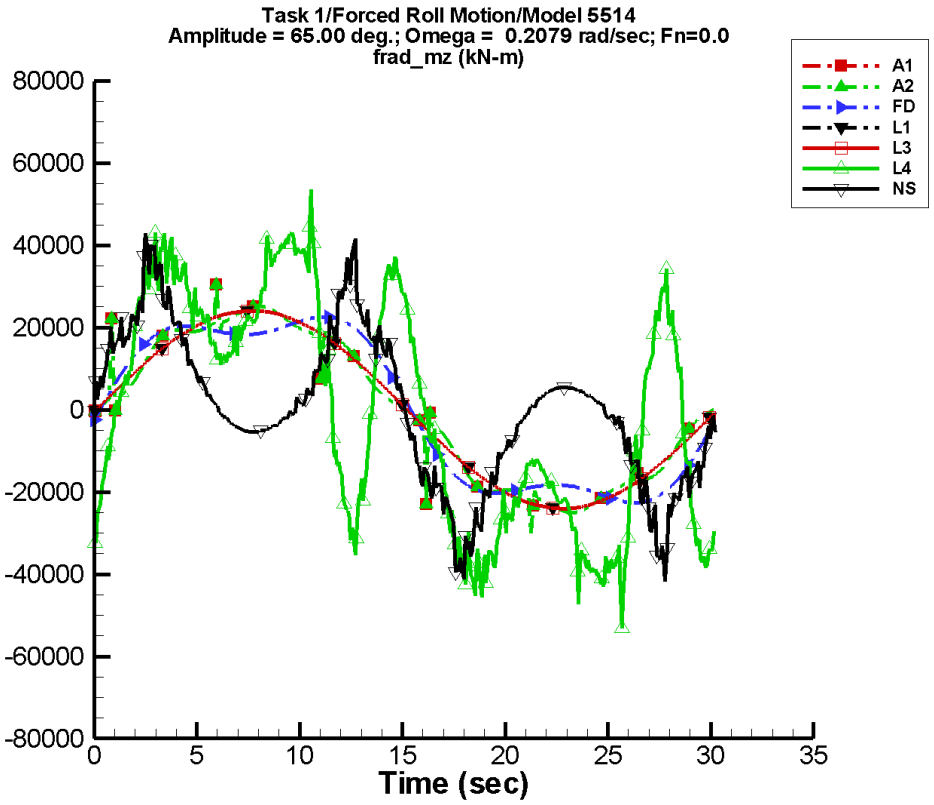
Figure D–544. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1087. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -26.7 | 1.65E+04 | 0 | 16.6 | 23 |
| A2 | -26.7 | 1.65E+04 | 0 | 16.6 | 23 |
| FD | 68.0 | 2.34E+04 | -4 | 313. | 54 |
| L1 | 0.640 | 1.66E+04 | -1 | 1.40 | 87 |
| L3 | 0.637 | 1.66E+04 | -1 | 1.41 | 87 |
| L4 | -137. | 1.85E+04 | -13 | 373. | 84 |
| NF | — | — | — | — | — |
| NS | 4.87 | 9.76E+03 | 2 | 4.56 | -99 |

Table D–1088. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.08E+04 | 2.11E+04 | -1.73E+04 | 1.74E+04 |
| A2 | -2.08E+04 | 2.11E+04 | -1.73E+04 | 1.74E+04 |
| FD | -2.13E+04 | 2.13E+04 | -2.13E+04 | 2.13E+04 |
| L1 | -1.67E+04 | 1.67E+04 | -1.66E+04 | 1.67E+04 |
| L3 | -1.67E+04 | 1.67E+04 | -1.66E+04 | 1.67E+04 |
| L4 | -2.57E+04 | 2.55E+04 | -2.06E+04 | 2.03E+04 |
| NF | — | — | — | — |
| NS | -1.78E+04 | 1.78E+04 | -1.54E+04 | 1.54E+04 |




Data identically zero, insufficient, or not available from NFA.

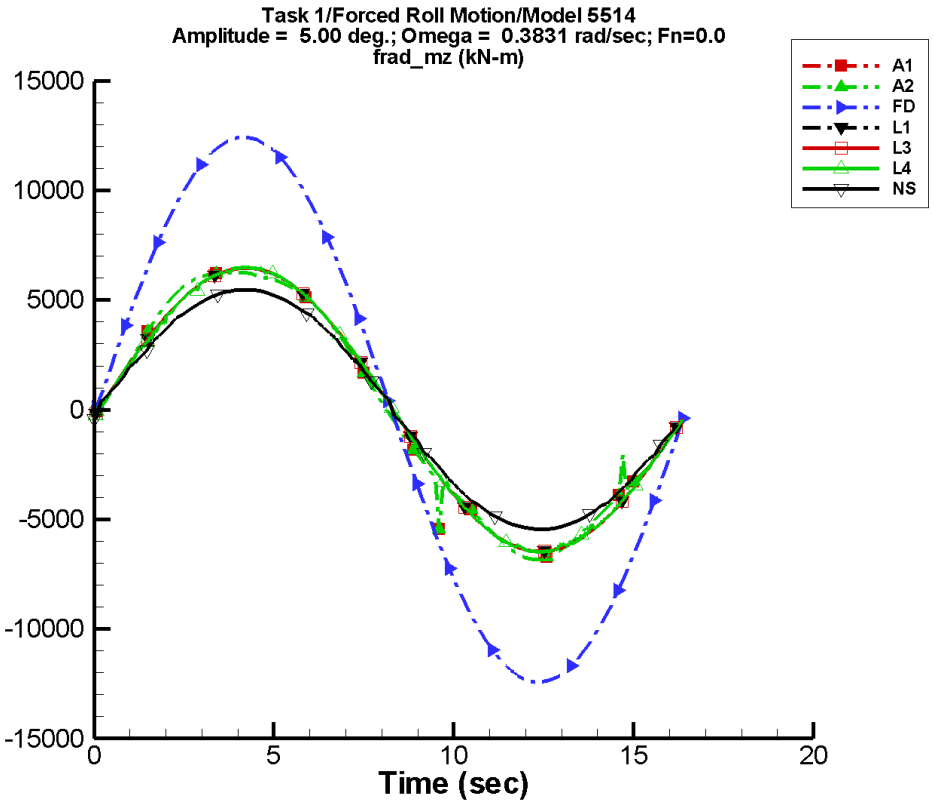
Figure D–545. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1089. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -38.5 | 2.38E+04 | 0 | 24.0 | 23 |
| A2 | -38.5 | 2.38E+04 | 0 | 24.0 | 23 |
| FD | 192. | 2.42E+04 | -4 | 881. | 54 |
| L1 | 0.924 | 2.40E+04 | -1 | 2.03 | 87 |
| L3 | 0.924 | 2.40E+04 | -1 | 2.03 | 87 |
| L4 | -1.52E+03 | 2.84E+04 | 8 | 2.99E+03 | -60 |
| NF | — | — | — | — | — |
| NS | 44.8 | 1.15E+04 | 10 | 16.1 | 105 |

Table D–1090. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.01E+04 | 3.05E+04 | -2.49E+04 | 2.51E+04 |
| A2 | -3.01E+04 | 3.05E+04 | -2.49E+04 | 2.51E+04 |
| FD | -2.26E+04 | 2.26E+04 | -2.25E+04 | 2.25E+04 |
| L1 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.41E+04 |
| L3 | -2.41E+04 | 2.41E+04 | -2.40E+04 | 2.41E+04 |
| L4 | -5.31E+04 | 5.35E+04 | -4.13E+04 | 4.14E+04 |
| NF | — | — | — | — |
| NS | -4.18E+04 | 4.28E+04 | -3.67E+04 | 3.72E+04 |




Data identically zero, insufficient, or not available from NFA.

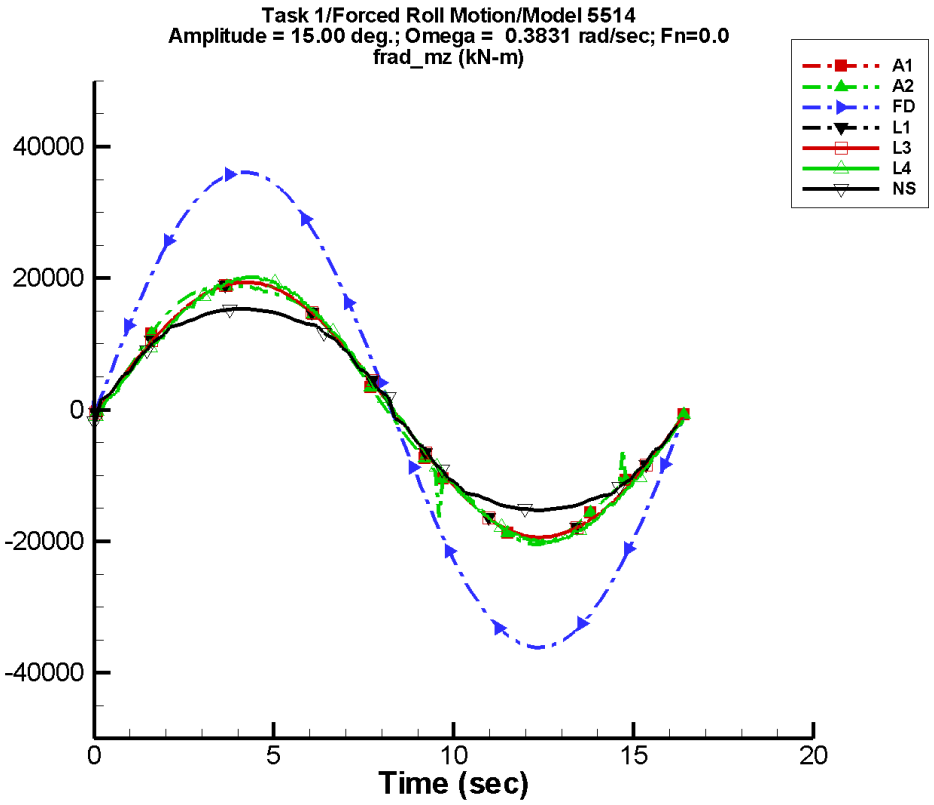
Figure D–546. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1091. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -14.8 | 6.46E+03 | 0 | 31.4 | -12 |
| A2 | -14.8 | 6.46E+03 | 0 | 31.4 | -12 |
| FD | 0.345 | 1.24E+04 | -1 | 2.39 | 75 |
| L1 | 2.46E-02 | 6.46E+03 | -3 | 0.409 | -171 |
| L3 | 2.42E-02 | 6.46E+03 | -3 | 0.410 | -171 |
| L4 | -5.81 | 6.45E+03 | -3 | 30.2 | -151 |
| NF | — | — | — | — | — |
| NS | 7.15E-02 | 5.51E+03 | -2 | 0.619 | 162 |

Table D–1092. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.83E+03 | 6.97E+03 | -6.78E+03 | 6.26E+03 |
| A2 | -6.83E+03 | 6.97E+03 | -6.78E+03 | 6.26E+03 |
| FD | -1.24E+04 | 1.24E+04 | -1.24E+04 | 1.24E+04 |
| L1 | -6.46E+03 | 6.46E+03 | -6.45E+03 | 6.45E+03 |
| L3 | -6.46E+03 | 6.46E+03 | -6.45E+03 | 6.45E+03 |
| L4 | -6.49E+03 | 6.48E+03 | -6.48E+03 | 6.48E+03 |
| NF | — | — | — | — |
| NS | -5.47E+03 | 5.48E+03 | -5.41E+03 | 5.42E+03 |




Data identically zero, insufficient, or not available from NFA.

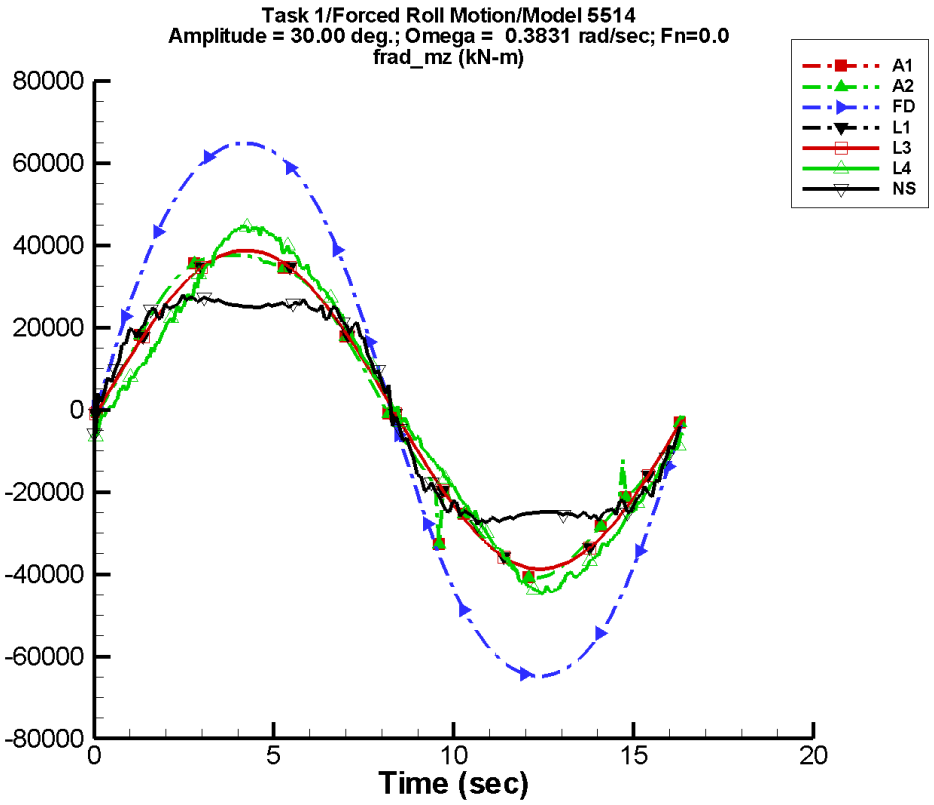
Figure D–547. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1093. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -44.2 | 1.94E+04 | 0 | 94.1 | -12 |
| A2 | -44.2 | 1.94E+04 | 0 | 94.1 | -12 |
| FD | 9.21 | 3.65E+04 | -1 | 64.0 | 75 |
| L1 | 6.89E-02 | 1.94E+04 | -3 | 1.23 | -171 |
| L3 | 7.05E-02 | 1.94E+04 | -3 | 1.22 | -171 |
| L4 | -127. | 1.97E+04 | -4 | 216. | -141 |
| NF | — | — | — | — | — |
| NS | 0.206 | 1.62E+04 | -2 | 1.62 | 168 |

Table D–1094. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.05E+04 | 2.09E+04 | -2.03E+04 | 1.88E+04 |
| A2 | -2.05E+04 | 2.09E+04 | -2.03E+04 | 1.88E+04 |
| FD | -3.61E+04 | 3.61E+04 | -3.60E+04 | 3.60E+04 |
| L1 | -1.94E+04 | 1.94E+04 | -1.94E+04 | 1.94E+04 |
| L3 | -1.94E+04 | 1.94E+04 | -1.94E+04 | 1.94E+04 |
| L4 | -2.02E+04 | 2.02E+04 | -2.00E+04 | 2.01E+04 |
| NF | — | — | — | — |
| NS | -1.53E+04 | 1.53E+04 | -1.52E+04 | 1.52E+04 |




Data identically zero, insufficient, or not available from NFA.

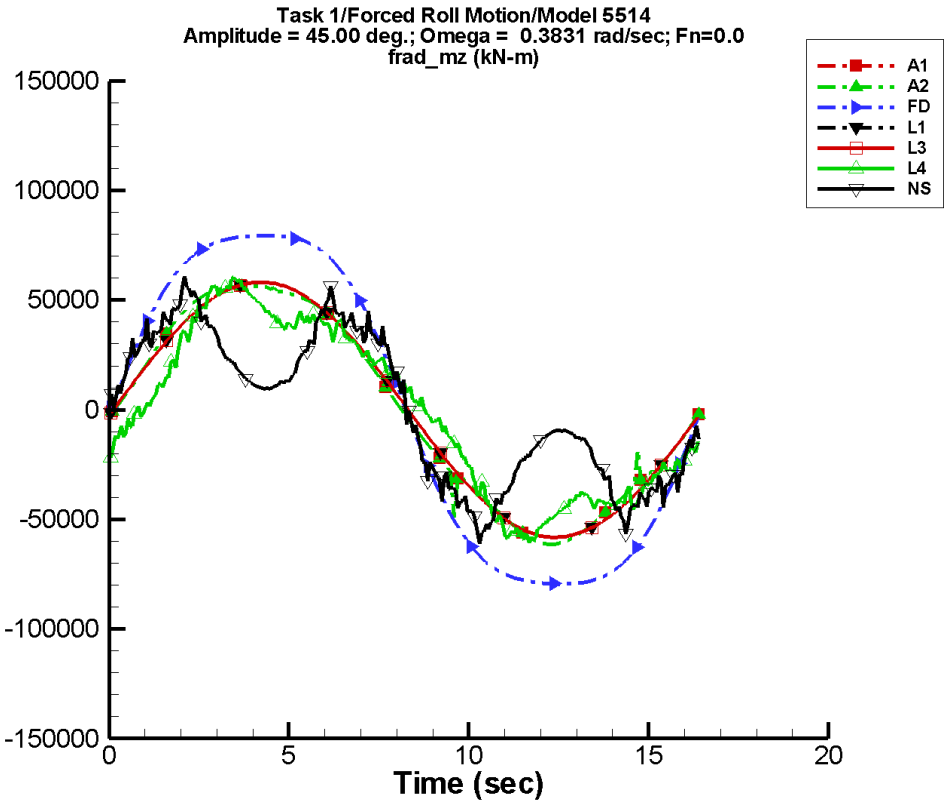
Figure D–548. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1095. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -88.5 | 3.88E+04 | 0 | 188. | -12 |
| A2 | -88.5 | 3.88E+04 | 0 | 188. | -12 |
| FD | 72.1 | 6.72E+04 | -1 | 502. | 74 |
| L1 | 0.156 | 3.88E+04 | -3 | 2.46 | -171 |
| L3 | 0.156 | 3.88E+04 | -3 | 2.46 | -171 |
| L4 | -636. | 4.05E+04 | -9 | 989. | -130 |
| NF | — | — | — | — | — |
| NS | 0.331 | 3.08E+04 | -2 | 2.58 | 157 |

Table D–1096. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -4.09E+04 | 4.18E+04 | -4.06E+04 | 3.75E+04 |
| A2 | -4.09E+04 | 4.18E+04 | -4.06E+04 | 3.75E+04 |
| FD | -6.48E+04 | 6.48E+04 | -6.47E+04 | 6.47E+04 |
| L1 | -3.88E+04 | 3.88E+04 | -3.87E+04 | 3.87E+04 |
| L3 | -3.88E+04 | 3.88E+04 | -3.87E+04 | 3.87E+04 |
| L4 | -4.46E+04 | 4.46E+04 | -4.42E+04 | 4.42E+04 |
| NF | — | — | — | — |
| NS | -2.81E+04 | 2.81E+04 | -2.69E+04 | 2.70E+04 |




Data identically zero, insufficient, or not available from NFA.

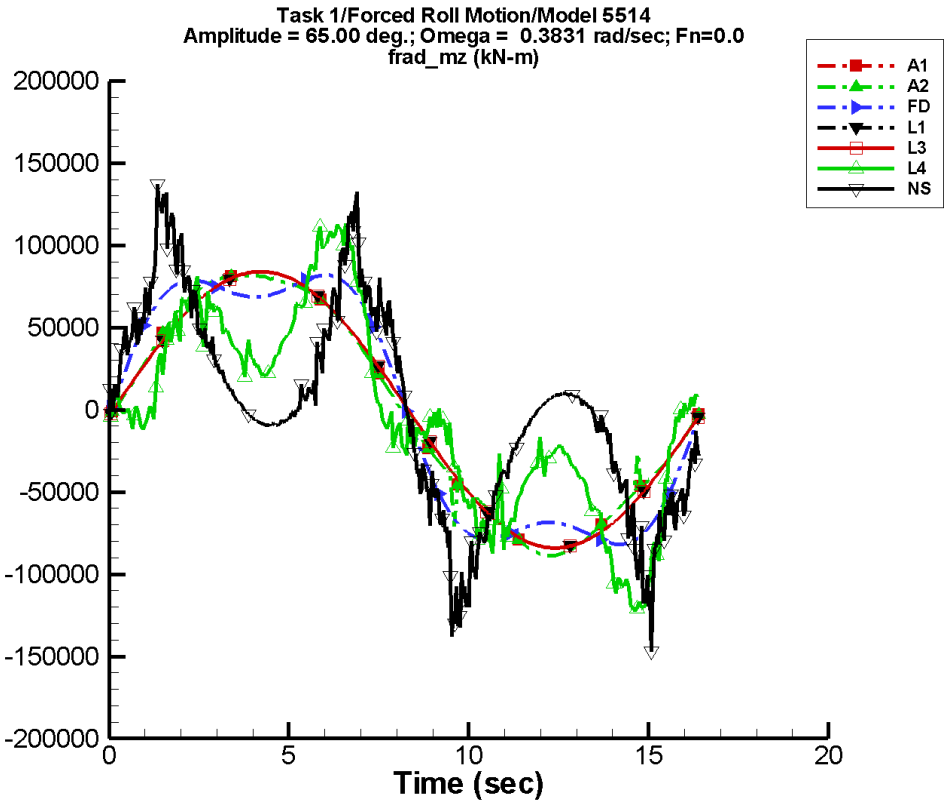
Figure D–549. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1097. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -133. | 5.81E+04 | 0 | 282. | -12 |
| A2 | -133. | 5.81E+04 | 0 | 282. | -12 |
| FD | 234. | 8.72E+04 | -1 | 1.63E+03 | 74 |
| L1 | 0.240 | 5.82E+04 | -3 | 3.68 | -171 |
| L3 | 0.238 | 5.82E+04 | -3 | 3.69 | -171 |
| L4 | -1.83E+03 | 5.14E+04 | -10 | 2.20E+03 | -107 |
| NF | — | — | — | — | — |
| NS | -4.88 | 3.75E+04 | 0 | 13.0 | 126 |

Table D–1098. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -6.14E+04 | 6.27E+04 | -6.10E+04 | 5.63E+04 |
| A2 | -6.14E+04 | 6.27E+04 | -6.10E+04 | 5.63E+04 |
| FD | -7.95E+04 | 7.95E+04 | -7.94E+04 | 7.94E+04 |
| L1 | -5.82E+04 | 5.81E+04 | -5.81E+04 | 5.81E+04 |
| L3 | -5.82E+04 | 5.81E+04 | -5.81E+04 | 5.81E+04 |
| L4 | -6.06E+04 | 6.03E+04 | -5.82E+04 | 5.79E+04 |
| NF | — | — | — | — |
| NS | -6.12E+04 | 6.11E+04 | -5.39E+04 | 5.38E+04 |




Data identically zero, insufficient, or not available from NFA.

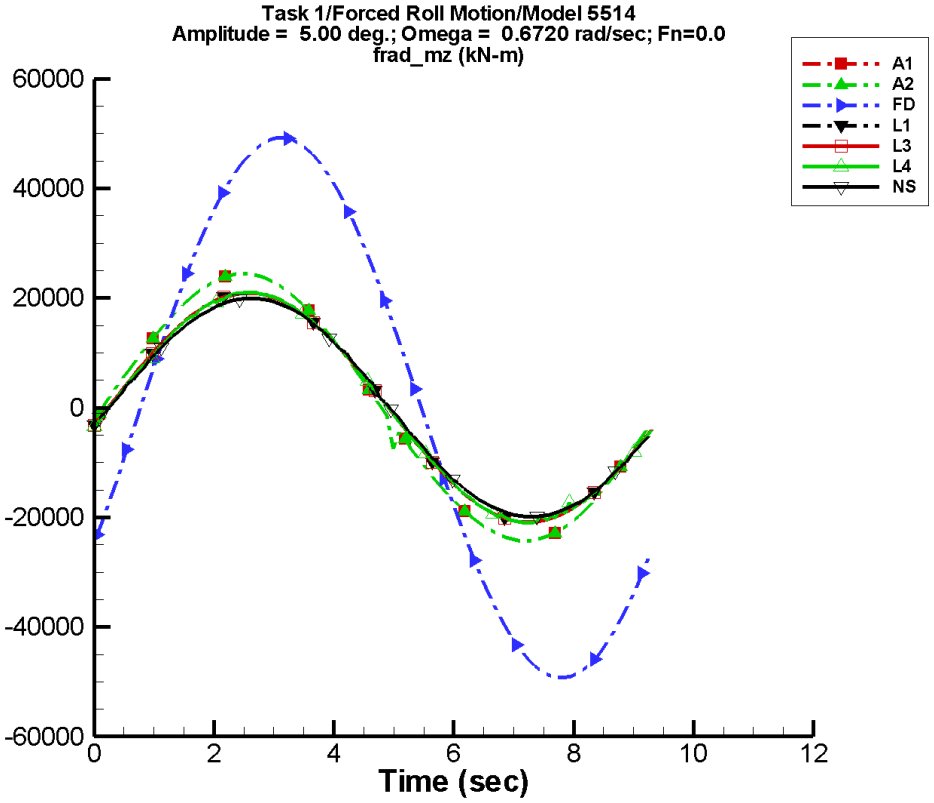
Figure D–550. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1099. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -192. | 8.40E+04 | 0 | 408. | -12 |
| A2 | -192. | 8.40E+04 | 0 | 408. | -12 |
| FD | 657. | 9.00E+04 | -1 | 4.59E+03 | 74 |
| L1 | 0.356 | 8.40E+04 | -3 | 5.31 | -171 |
| L3 | 0.348 | 8.40E+04 | -3 | 5.31 | -171 |
| L4 | -2.23E+03 | 7.04E+04 | -12 | 3.11E+03 | -75 |
| NF | — | — | — | — | — |
| NS | 11.0 | 4.57E+04 | 5 | 203. | 72 |

Table D–1100. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.87E+04 | 9.06E+04 | -8.80E+04 | 8.13E+04 |
| A2 | -8.87E+04 | 9.06E+04 | -8.80E+04 | 8.13E+04 |
| FD | -8.18E+04 | 8.18E+04 | -8.12E+04 | 8.12E+04 |
| L1 | -8.40E+04 | 8.40E+04 | -8.39E+04 | 8.39E+04 |
| L3 | -8.40E+04 | 8.40E+04 | -8.39E+04 | 8.39E+04 |
| L4 | -1.23E+05 | 1.13E+05 | -1.18E+05 | 1.08E+05 |
| NF | — | — | — | — |
| NS | -1.47E+05 | 1.38E+05 | -1.22E+05 | 1.25E+05 |




Data identically zero, insufficient, or not available from NFA.

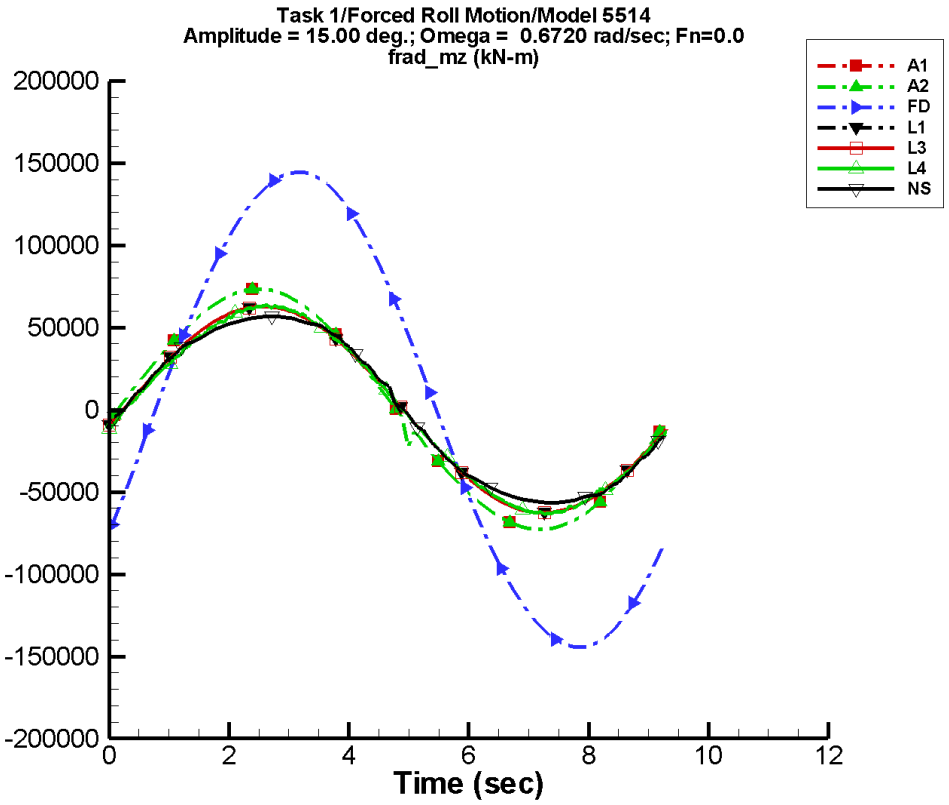
Figure D–551. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1101. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -33.6 | 2.41E+04 | -5 | 87.2 | -81 |
| A2 | -33.6 | 2.41E+04 | -5 | 87.2 | -81 |
| FD | 2.16 | 4.93E+04 | -30 | 6.13 | 118 |
| L1 | 0.561 | 2.09E+04 | -9 | 1.25 | -131 |
| L3 | 0.560 | 2.09E+04 | -9 | 1.25 | -131 |
| L4 | -16.7 | 2.08E+04 | -9 | 160. | -158 |
| NF | — | — | — | — | — |
| NS | -1.07 | 2.00E+04 | -10 | 3.40 | -158 |

Table D–1102. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.43E+04 | 2.45E+04 | -2.40E+04 | 2.41E+04 |
| A2 | -2.43E+04 | 2.45E+04 | -2.40E+04 | 2.41E+04 |
| FD | -4.92E+04 | 4.93E+04 | -4.87E+04 | 4.87E+04 |
| L1 | -2.09E+04 | 2.09E+04 | -2.08E+04 | 2.08E+04 |
| L3 | -2.09E+04 | 2.09E+04 | -2.08E+04 | 2.08E+04 |
| L4 | -2.10E+04 | 2.10E+04 | -2.08E+04 | 2.09E+04 |
| NF | — | — | — | — |
| NS | -1.99E+04 | 1.99E+04 | -1.97E+04 | 1.97E+04 |




Data identically zero, insufficient, or not available from NFA.

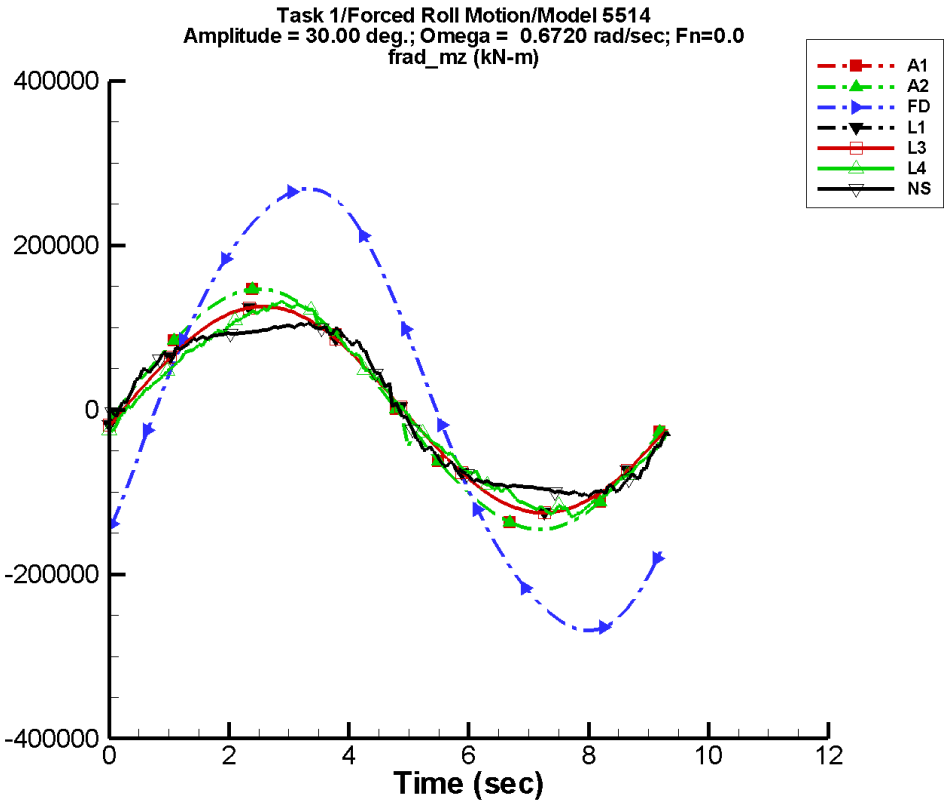
Figure D–552. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1103. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -101. | 7.23E+04 | -5 | 261. | -81 |
| A2 | -101. | 7.23E+04 | -5 | 261. | -81 |
| FD | 60.3 | 1.45E+05 | -30 | 164. | 117 |
| L1 | 1.71 | 6.27E+04 | -9 | 3.74 | -132 |
| L3 | 1.71 | 6.27E+04 | -9 | 3.74 | -132 |
| L4 | -418. | 6.20E+04 | -10 | 853. | -161 |
| NF | — | — | — | — | — |
| NS | -3.19 | 5.90E+04 | -11 | 10.2 | 176 |

Table D–1104. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.28E+04 | 7.33E+04 | -7.19E+04 | 7.24E+04 |
| A2 | -7.28E+04 | 7.33E+04 | -7.19E+04 | 7.24E+04 |
| FD | -1.44E+05 | 1.44E+05 | -1.43E+05 | 1.43E+05 |
| L1 | -6.27E+04 | 6.27E+04 | -6.24E+04 | 6.25E+04 |
| L3 | -6.27E+04 | 6.27E+04 | -6.24E+04 | 6.25E+04 |
| L4 | -6.33E+04 | 6.35E+04 | -6.26E+04 | 6.27E+04 |
| NF | — | — | — | — |
| NS | -5.65E+04 | 5.66E+04 | -5.61E+04 | 5.62E+04 |




Data identically zero, insufficient, or not available from NFA.

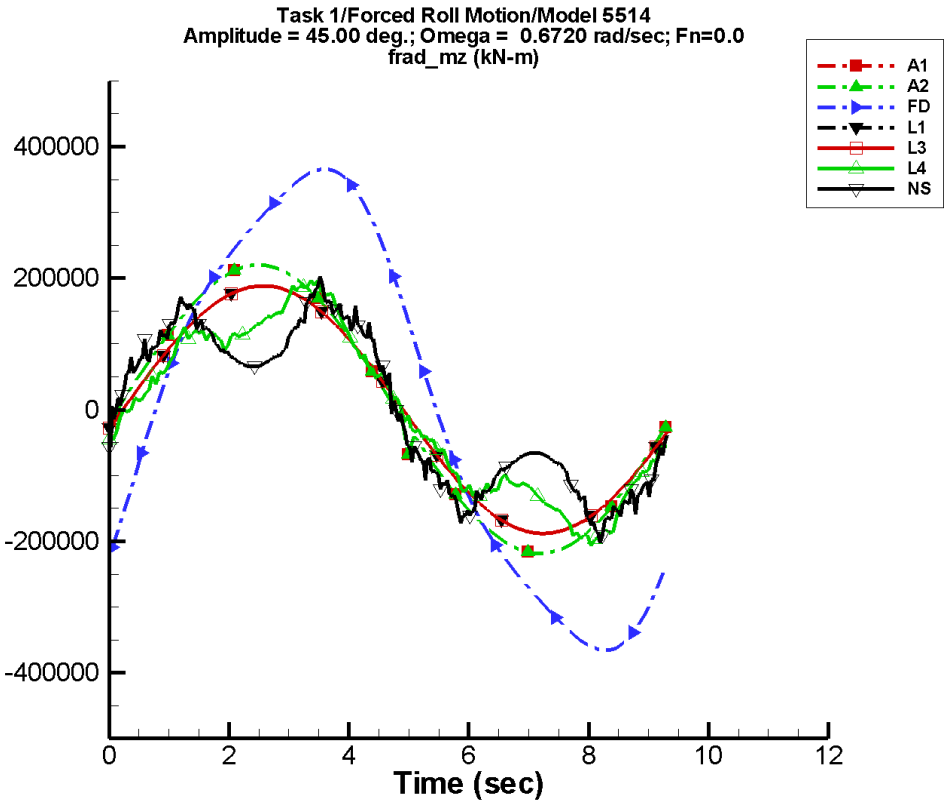
Figure D–553. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1105. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -202. | 1.45E+05 | -5 | 523. | -81 |
| A2 | -202. | 1.45E+05 | -5 | 523. | -81 |
| FD | 472. | 2.71E+05 | -32 | 1.29E+03 | 117 |
| L1 | 3.44 | 1.25E+05 | -9 | 7.40 | -132 |
| L3 | 3.44 | 1.25E+05 | -9 | 7.39 | -132 |
| L4 | -1.24E+03 | 1.22E+05 | -13 | 2.21E+03 | -145 |
| NF | — | — | — | — | — |
| NS | -4.34 | 1.12E+05 | -10 | 13.8 | -143 |

Table D–1106. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.46E+05 | 1.47E+05 | -1.44E+05 | 1.45E+05 |
| A2 | -1.46E+05 | 1.47E+05 | -1.44E+05 | 1.45E+05 |
| FD | -2.69E+05 | 2.69E+05 | -2.66E+05 | 2.66E+05 |
| L1 | -1.25E+05 | 1.25E+05 | -1.25E+05 | 1.25E+05 |
| L3 | -1.25E+05 | 1.25E+05 | -1.25E+05 | 1.25E+05 |
| L4 | -1.31E+05 | 1.33E+05 | -1.24E+05 | 1.28E+05 |
| NF | — | — | — | — |
| NS | -1.06E+05 | 1.06E+05 | -1.02E+05 | 1.03E+05 |




Data identically zero, insufficient, or not available from NFA.

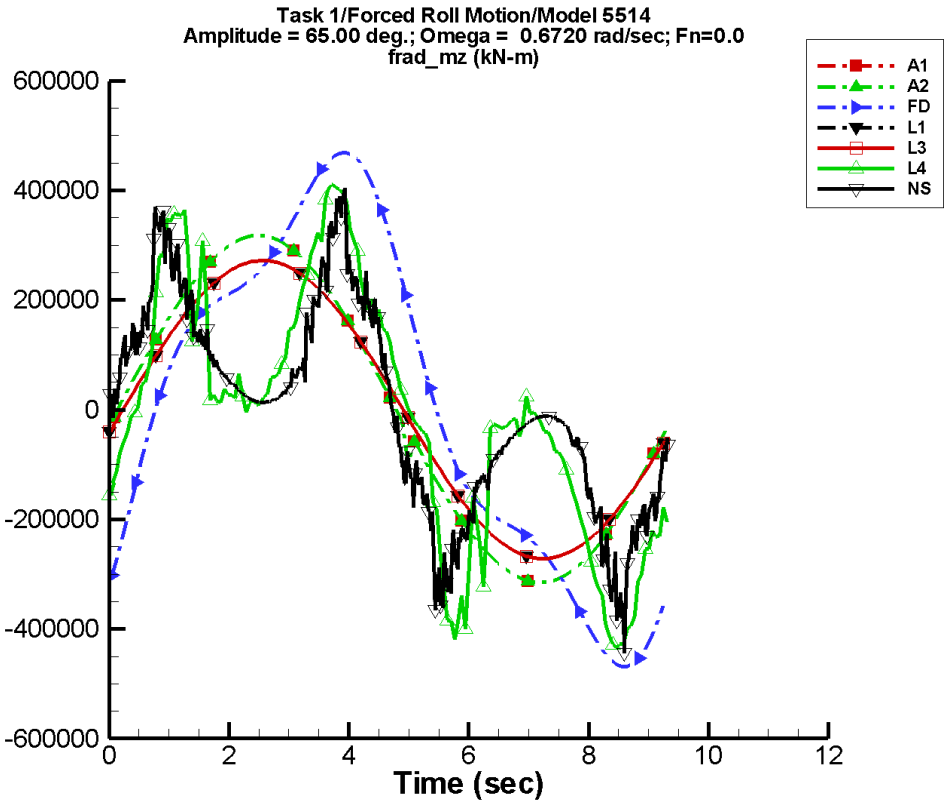
Figure D–554. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1107. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -302. | 2.17E+05 | -5 | 784. | -81 |
| A2 | -302. | 2.17E+05 | -5 | 784. | -81 |
| FD | 1.53E+03 | 3.61E+05 | -34 | 4.20E+03 | 116 |
| L1 | 5.19 | 1.88E+05 | -9 | 11.1 | -131 |
| L3 | 5.21 | 1.88E+05 | -9 | 11.1 | -131 |
| L4 | -2.65E+03 | 1.67E+05 | -15 | 3.16E+03 | -45 |
| NF | — | — | — | — | — |
| NS | -16.5 | 1.43E+05 | -9 | 33.8 | -47 |

Table D–1108. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.18E+05 | 2.20E+05 | -2.16E+05 | 2.17E+05 |
| A2 | -2.18E+05 | 2.20E+05 | -2.16E+05 | 2.17E+05 |
| FD | -3.66E+05 | 3.66E+05 | -3.61E+05 | 3.60E+05 |
| L1 | -1.88E+05 | 1.88E+05 | -1.87E+05 | 1.87E+05 |
| L3 | -1.88E+05 | 1.88E+05 | -1.87E+05 | 1.87E+05 |
| L4 | -2.07E+05 | 1.97E+05 | -1.95E+05 | 1.89E+05 |
| NF | — | — | — | — |
| NS | -2.03E+05 | 2.03E+05 | -1.80E+05 | 1.80E+05 |




Data identically zero, insufficient, or not available from NFA.

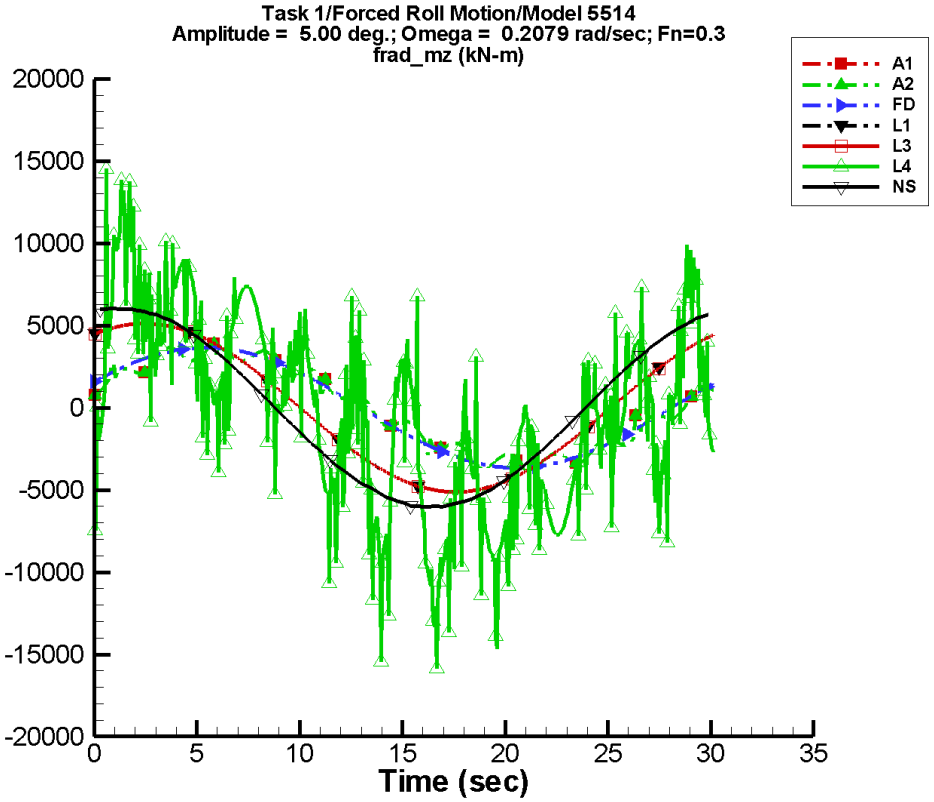
Figure D–555. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1109. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -437. | 3.13E+05 | -5 | 1.13E+03 | -81 |
| A2 | -437. | 3.13E+05 | -5 | 1.13E+03 | -81 |
| FD | 4.25E+03 | 4.06E+05 | -40 | 1.19E+04 | 115 |
| L1 | 7.65 | 2.72E+05 | -9 | 15.9 | -132 |
| L3 | 7.62 | 2.72E+05 | -9 | 15.9 | -132 |
| L4 | 3.92E+03 | 2.37E+05 | -18 | 2.87E+04 | -19 |
| NF | — | — | — | — | — |
| NS | -108. | 1.65E+05 | -5 | 333. | 145 |

Table D–1110. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.16E+05 | 3.18E+05 | -3.12E+05 | 3.14E+05 |
| A2 | -3.16E+05 | 3.18E+05 | -3.12E+05 | 3.14E+05 |
| FD | -4.69E+05 | 4.69E+05 | -4.56E+05 | 4.57E+05 |
| L1 | -2.72E+05 | 2.72E+05 | -2.71E+05 | 2.71E+05 |
| L3 | -2.72E+05 | 2.72E+05 | -2.71E+05 | 2.71E+05 |
| L4 | -4.34E+05 | 4.11E+05 | -4.12E+05 | 3.86E+05 |
| NF | — | — | — | — |
| NS | -4.43E+05 | 4.04E+05 | -3.63E+05 | 3.69E+05 |




Data identically zero, insufficient, or not available from NFA.

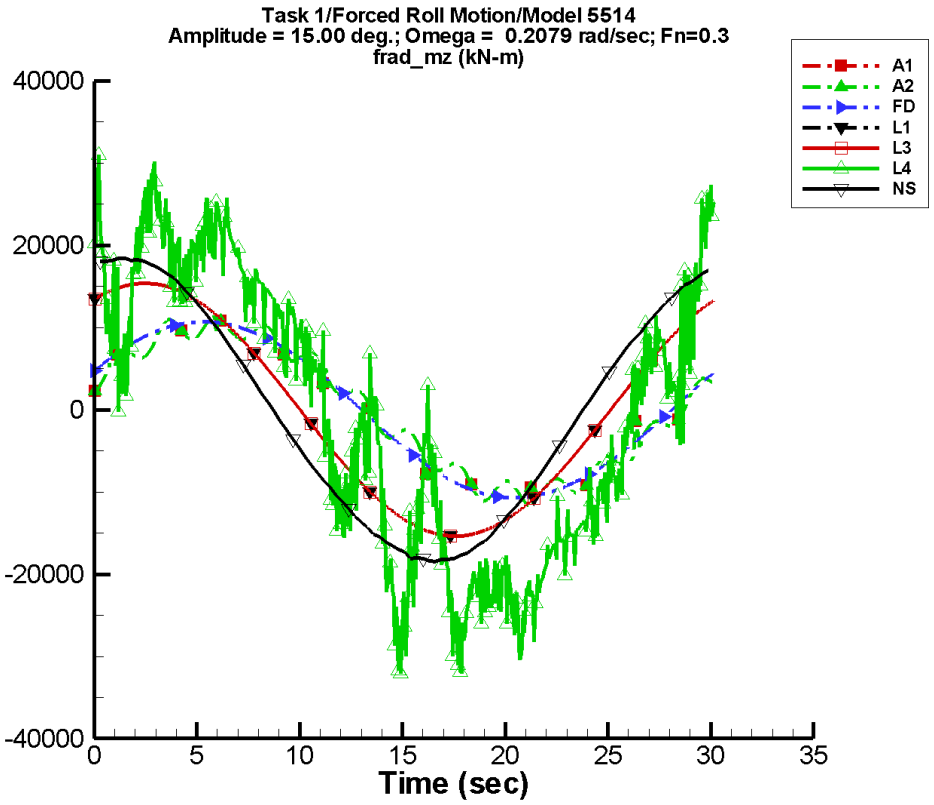
Figure D–556. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1111. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -1.81 | 3.40E+03 | 21 | 5.02 | -19 |
| A2 | -1.81 | 3.40E+03 | 21 | 5.02 | -19 |
| FD | 5.89E-02 | 3.66E+03 | 25 | 0.626 | 78 |
| L1 | -0.836 | 5.12E+03 | 61 | 0.145 | -158 |
| L3 | -1.45 | 5.12E+03 | 61 | 3.62E-02 | -156 |
| L4 | -139. | 6.11E+03 | 49 | 275. | 77 |
| NF | — | — | — | — | — |
| NS | 1.79E-02 | 6.03E+03 | 75 | 7.61E-02 | 53 |

Table D–1112. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.89E+03 | 3.89E+03 | -3.65E+03 | 3.66E+03 |
| A2 | -3.89E+03 | 3.89E+03 | -3.65E+03 | 3.66E+03 |
| FD | -3.65E+03 | 3.65E+03 | -3.65E+03 | 3.65E+03 |
| L1 | -5.13E+03 | 5.12E+03 | -5.12E+03 | 5.12E+03 |
| L3 | -5.12E+03 | 5.12E+03 | -5.12E+03 | 5.12E+03 |
| L4 | -1.59E+04 | 1.49E+04 | -1.20E+04 | 1.15E+04 |
| NF | — | — | — | — |
| NS | -6.04E+03 | 6.04E+03 | -5.97E+03 | 5.97E+03 |




Data identically zero, insufficient, or not available from NFA.

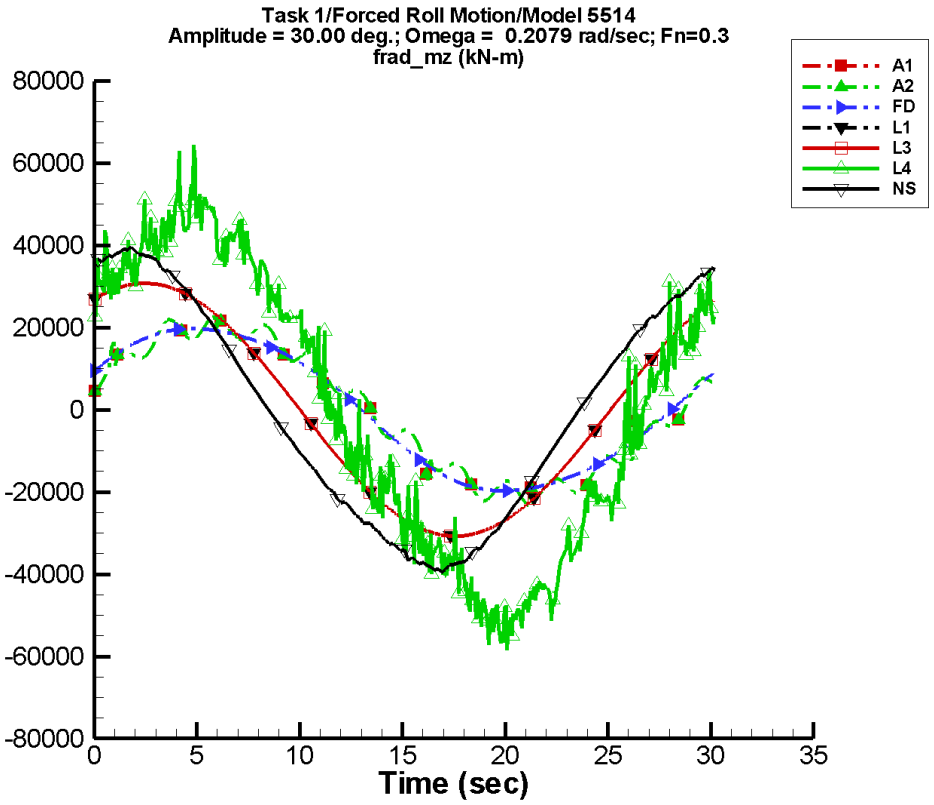
Figure D–557. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1113. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.42 | 1.02E+04 | 21 | 15.0 | -19 |
| A2 | -5.42 | 1.02E+04 | 21 | 15.0 | -19 |
| FD | 1.61 | 1.07E+04 | 25 | 16.8 | 78 |
| L1 | -0.920 | 1.54E+04 | 61 | 0.174 | -157 |
| L3 | -1.50 | 1.54E+04 | 61 | 3.68E-02 | -139 |
| L4 | -686. | 2.20E+04 | 43 | 638. | -143 |
| NF | — | — | — | — | — |
| NS | 1.65E-02 | 1.82E+04 | 75 | 0.425 | 35 |

Table D–1114. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.17E+04 | 1.17E+04 | -1.09E+04 | 1.10E+04 |
| A2 | -1.17E+04 | 1.17E+04 | -1.09E+04 | 1.10E+04 |
| FD | -1.07E+04 | 1.07E+04 | -1.07E+04 | 1.07E+04 |
| L1 | -1.54E+04 | 1.54E+04 | -1.54E+04 | 1.54E+04 |
| L3 | -1.54E+04 | 1.54E+04 | -1.54E+04 | 1.54E+04 |
| L4 | -3.20E+04 | 3.10E+04 | -2.82E+04 | 2.64E+04 |
| NF | — | — | — | — |
| NS | -1.85E+04 | 1.85E+04 | -1.82E+04 | 1.82E+04 |




Data identically zero, insufficient, or not available from NFA.

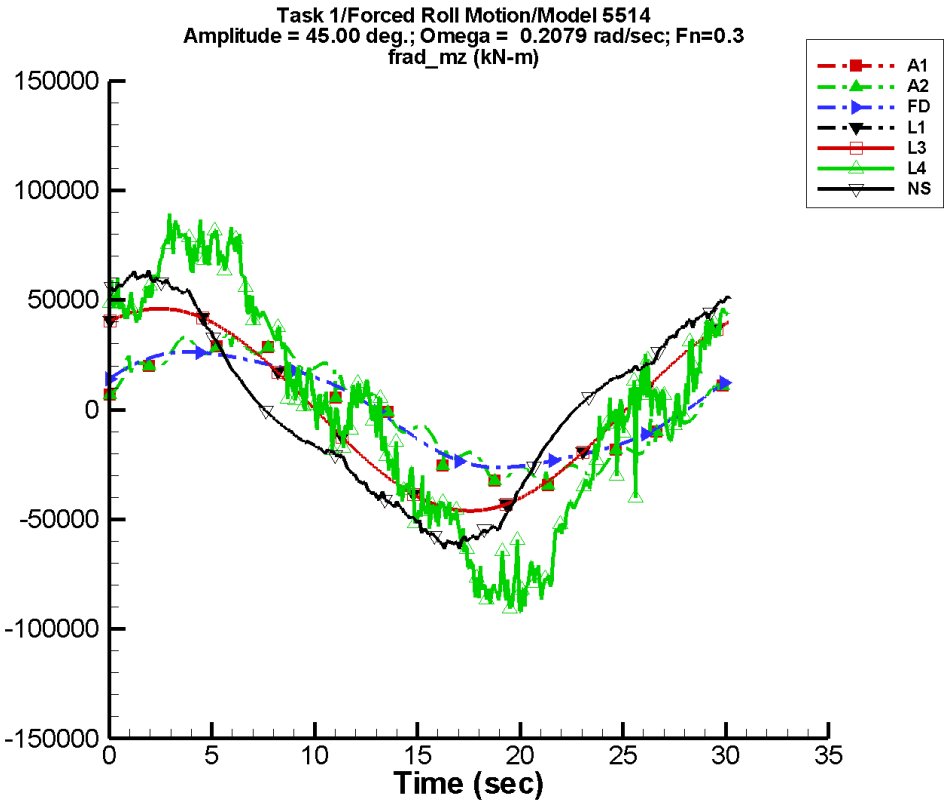
Figure D–558. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1115. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -10.8 | 2.04E+04 | 21 | 30.1 | -19 |
| A2 | -10.8 | 2.04E+04 | 21 | 30.1 | -19 |
| FD | 12.6 | 2.00E+04 | 27 | 132. | 78 |
| L1 | -0.969 | 3.07E+04 | 61 | 0.143 | -148 |
| L3 | -1.55 | 3.07E+04 | 61 | 4.75E-02 | -43 |
| L4 | -249. | 4.68E+04 | 38 | 619. | 176 |
| NF | — | — | — | — | — |
| NS | 0.507 | 3.68E+04 | 76 | 1.16 | 44 |

Table D–1116. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.33E+04 | 2.33E+04 | -2.19E+04 | 2.20E+04 |
| A2 | -2.33E+04 | 2.33E+04 | -2.19E+04 | 2.20E+04 |
| FD | -1.97E+04 | 1.97E+04 | -1.97E+04 | 1.97E+04 |
| L1 | -3.07E+04 | 3.07E+04 | -3.07E+04 | 3.07E+04 |
| L3 | -3.07E+04 | 3.07E+04 | -3.07E+04 | 3.07E+04 |
| L4 | -5.84E+04 | 6.43E+04 | -5.32E+04 | 5.35E+04 |
| NF | — | — | — | — |
| NS | -3.96E+04 | 3.96E+04 | -3.85E+04 | 3.85E+04 |




Data identically zero, insufficient, or not available from NFA.

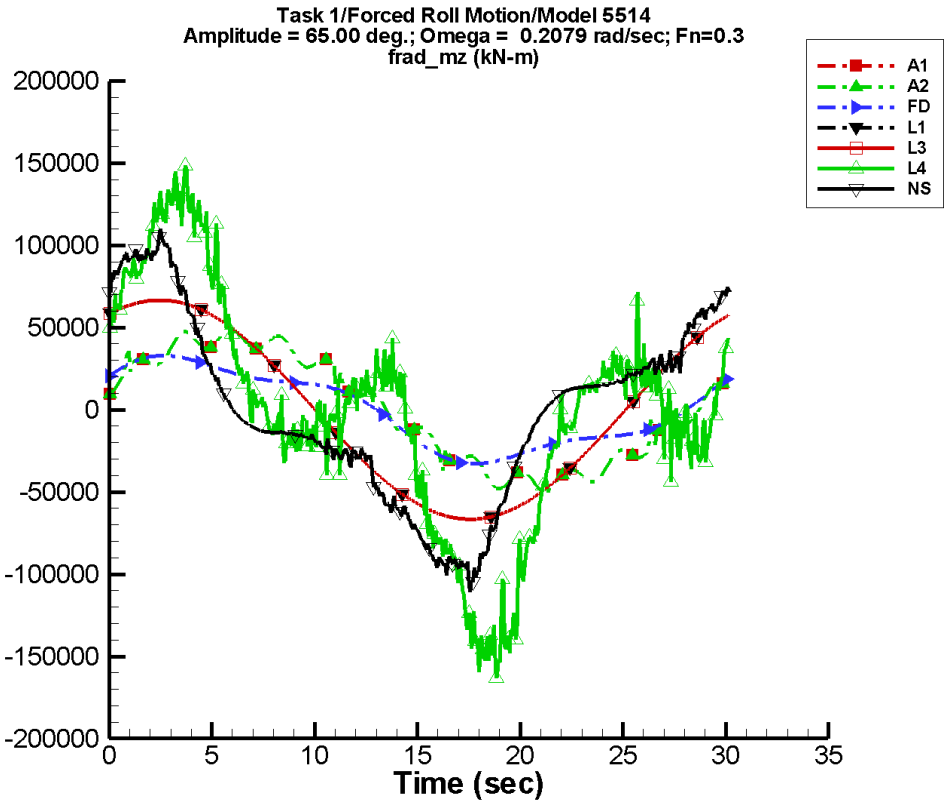
Figure D–559. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1117. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -16.3 | 3.06E+04 | 21 | 45.1 | -19 |
| A2 | -16.3 | 3.06E+04 | 21 | 45.1 | -19 |
| FD | 41.3 | 2.66E+04 | 30 | 432. | 79 |
| L1 | -1.04 | 4.61E+04 | 61 | 0.187 | -146 |
| L3 | -1.58 | 4.61E+04 | 61 | 8.07E-02 | -73 |
| L4 | 40.3 | 6.73E+04 | 45 | 1.81E+03 | 87 |
| NF | — | — | — | — | — |
| NS | 9.88 | 5.42E+04 | 80 | 10.7 | -90 |

Table D–1118. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.50E+04 | 3.50E+04 | -3.28E+04 | 3.29E+04 |
| A2 | -3.50E+04 | 3.50E+04 | -3.28E+04 | 3.29E+04 |
| FD | -2.63E+04 | 2.63E+04 | -2.63E+04 | 2.63E+04 |
| L1 | -4.61E+04 | 4.61E+04 | -4.61E+04 | 4.61E+04 |
| L3 | -4.61E+04 | 4.61E+04 | -4.61E+04 | 4.61E+04 |
| L4 | -9.21E+04 | 9.31E+04 | -8.41E+04 | 8.35E+04 |
| NF | — | — | — | — |
| NS | -6.35E+04 | 6.35E+04 | -6.09E+04 | 6.09E+04 |




Data identically zero, insufficient, or not available from NFA.

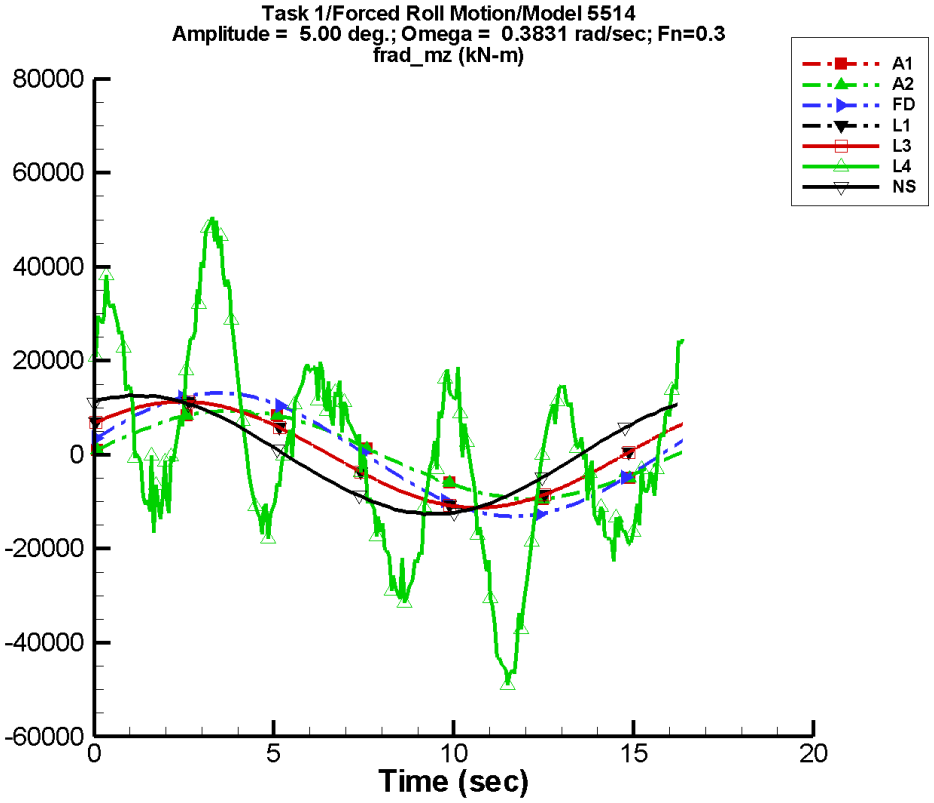
Figure D–560. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1119. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -23.5 | 4.42E+04 | 21 | 65.2 | -19 |
| A2 | -23.5 | 4.42E+04 | 21 | 65.2 | -19 |
| FD | 116. | 2.97E+04 | 37 | 1.23E+03 | 79 |
| L1 | -1.10 | 6.66E+04 | 61 | 0.251 | -140 |
| L3 | -1.60 | 6.66E+04 | 61 | 0.143 | -76 |
| L4 | 2.10E+03 | 7.88E+04 | 56 | 1.05E+04 | 90 |
| NF | — | — | — | — | — |
| NS | -77.8 | 7.17E+04 | 85 | 163. | 93 |

Table D–1120. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.05E+04 | 5.06E+04 | -4.74E+04 | 4.76E+04 |
| A2 | -5.05E+04 | 5.06E+04 | -4.74E+04 | 4.76E+04 |
| FD | -3.30E+04 | 3.30E+04 | -3.29E+04 | 3.29E+04 |
| L1 | -6.66E+04 | 6.66E+04 | -6.66E+04 | 6.66E+04 |
| L3 | -6.66E+04 | 6.66E+04 | -6.66E+04 | 6.66E+04 |
| L4 | -1.63E+05 | 1.54E+05 | -1.48E+05 | 1.34E+05 |
| NF | — | — | — | — |
| NS | -1.11E+05 | 1.10E+05 | -1.01E+05 | 1.02E+05 |




Data identically zero, insufficient, or not available from NFA.

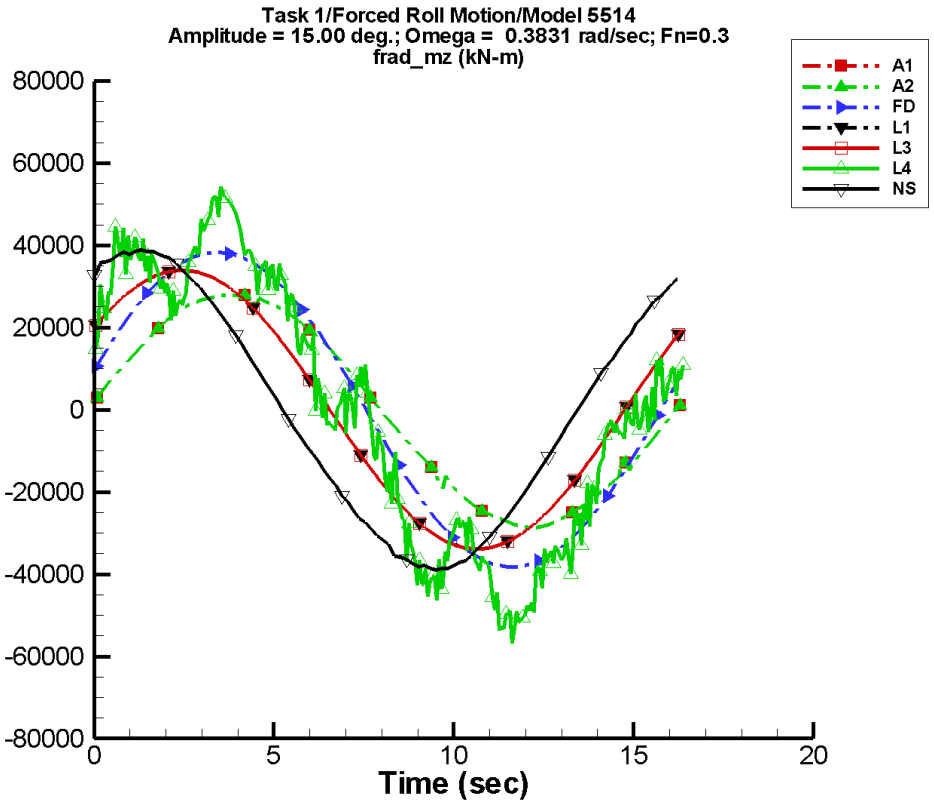
Figure D–561. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1121. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -5.06 | 9.36E+03 | 5 | 36.0 | 46 |
| A2 | -5.06 | 9.36E+03 | 5 | 36.0 | 46 |
| FD | 0.509 | 1.31E+04 | 14 | 2.65 | 90 |
| L1 | -0.669 | 1.13E+04 | 36 | 1.98E-02 | 56 |
| L3 | -1.49 | 1.13E+04 | 36 | 6.99E-02 | 38 |
| L4 | -286. | 1.47E+04 | 30 | 1.95E+03 | 143 |
| NF | — | — | — | — | — |
| NS | -0.331 | 1.26E+04 | 63 | 1.04 | -127 |

Table D–1122. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -9.56E+03 | 9.64E+03 | -9.50E+03 | 9.31E+03 |
| A2 | -9.56E+03 | 9.64E+03 | -9.50E+03 | 9.31E+03 |
| FD | -1.31E+04 | 1.31E+04 | -1.31E+04 | 1.31E+04 |
| L1 | -1.13E+04 | 1.13E+04 | -1.13E+04 | 1.13E+04 |
| L3 | -1.13E+04 | 1.13E+04 | -1.13E+04 | 1.13E+04 |
| L4 | -4.90E+04 | 5.05E+04 | -4.57E+04 | 4.70E+04 |
| NF | — | — | — | — |
| NS | -1.26E+04 | 1.26E+04 | -1.25E+04 | 1.24E+04 |




Data identically zero, insufficient, or not available from NFA.

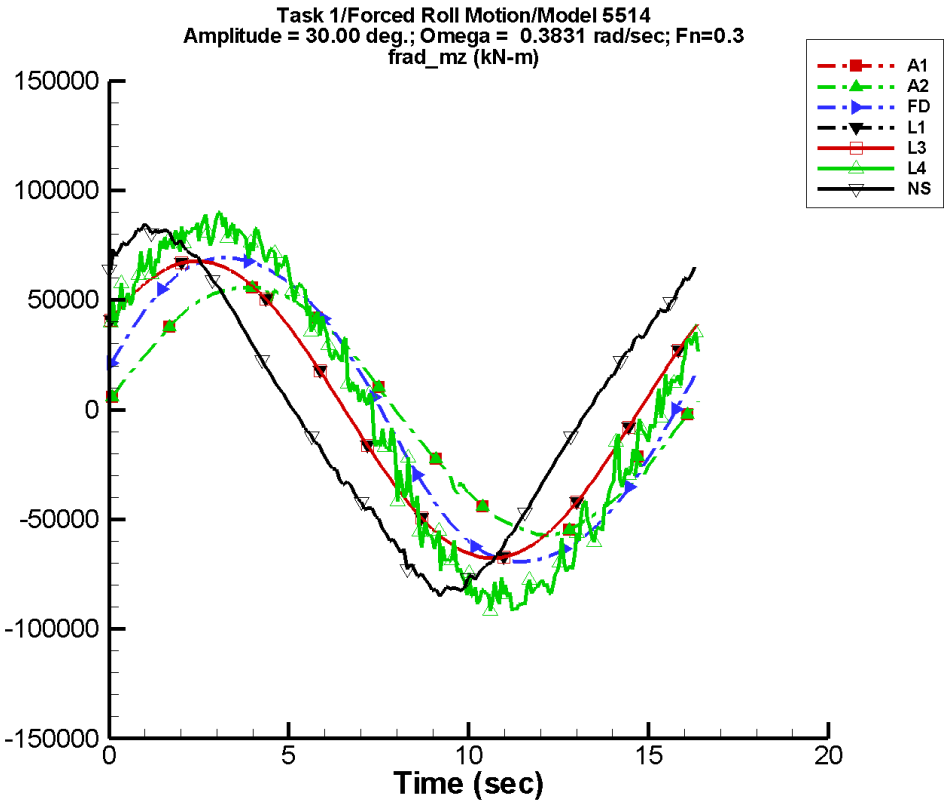
Figure D–562. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1123. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -15.2 | 2.81E+04 | 5 | 108. | 46 |
| A2 | -15.2 | 2.81E+04 | 5 | 108. | 46 |
| FD | 13.6 | 3.85E+04 | 14 | 71.1 | 90 |
| L1 | -0.699 | 3.39E+04 | 36 | 5.23E-02 | -132 |
| L3 | -1.52 | 3.39E+04 | 36 | 3.15E-02 | -155 |
| L4 | -8.39 | 4.34E+04 | 26 | 1.67E+03 | 121 |
| NF | — | — | — | — | — |
| NS | -0.807 | 3.78E+04 | 64 | 3.73 | -126 |

Table D–1124. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.87E+04 | 2.89E+04 | -2.85E+04 | 2.79E+04 |
| A2 | -2.87E+04 | 2.89E+04 | -2.85E+04 | 2.79E+04 |
| FD | -3.82E+04 | 3.82E+04 | -3.81E+04 | 3.81E+04 |
| L1 | -3.39E+04 | 3.39E+04 | -3.38E+04 | 3.38E+04 |
| L3 | -3.39E+04 | 3.39E+04 | -3.38E+04 | 3.38E+04 |
| L4 | -5.67E+04 | 5.42E+04 | -5.18E+04 | 5.15E+04 |
| NF | — | — | — | — |
| NS | -3.90E+04 | 3.89E+04 | -3.84E+04 | 3.83E+04 |




Data identically zero, insufficient, or not available from NFA.

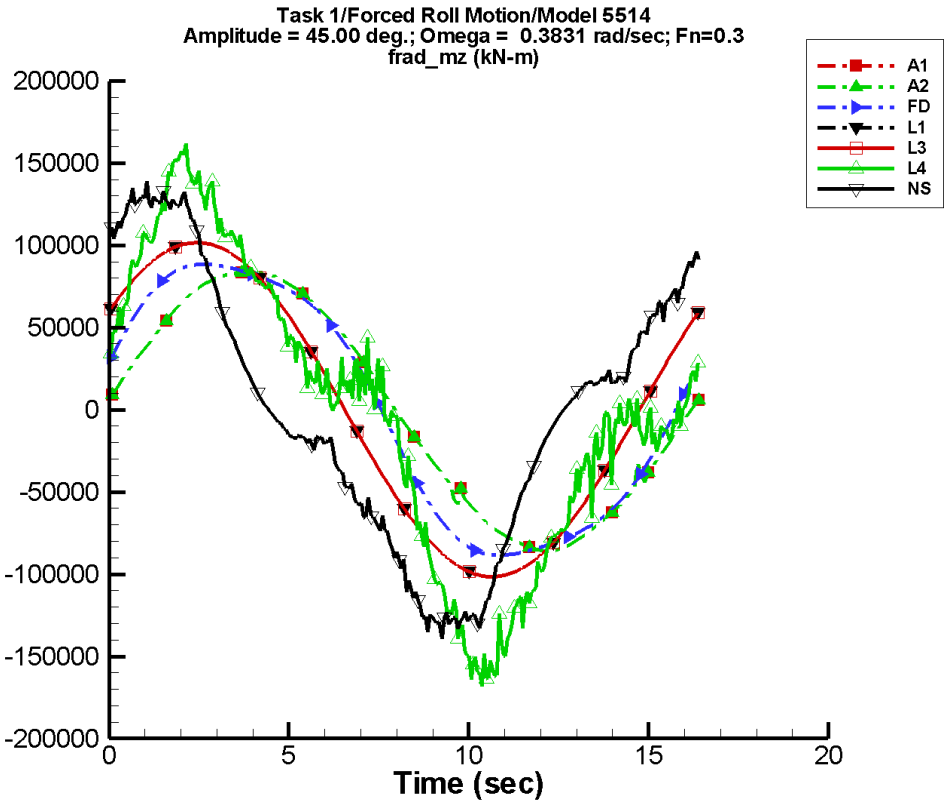
Figure D–563. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1125. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -30.3 | 5.61E+04 | 5 | 216. | 46 |
| A2 | -30.3 | 5.61E+04 | 5 | 216. | 46 |
| FD | 107. | 7.14E+04 | 15 | 558. | 90 |
| L1 | -0.722 | 6.77E+04 | 36 | 0.129 | -142 |
| L3 | -1.56 | 6.77E+04 | 36 | 8.78E-02 | -130 |
| L4 | 759. | 8.51E+04 | 25 | 2.01E+03 | 147 |
| NF | — | — | — | — | — |
| NS | -1.48 | 7.59E+04 | 65 | 9.25 | -132 |

Table D–1126. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -5.73E+04 | 5.78E+04 | -5.70E+04 | 5.59E+04 |
| A2 | -5.73E+04 | 5.78E+04 | -5.70E+04 | 5.59E+04 |
| FD | -6.92E+04 | 6.92E+04 | -6.90E+04 | 6.91E+04 |
| L1 | -6.77E+04 | 6.77E+04 | -6.76E+04 | 6.76E+04 |
| L3 | -6.77E+04 | 6.77E+04 | -6.76E+04 | 6.76E+04 |
| L4 | -9.17E+04 | 9.00E+04 | -8.83E+04 | 8.45E+04 |
| NF | — | — | — | — |
| NS | -8.50E+04 | 8.48E+04 | -8.22E+04 | 8.20E+04 |




Data identically zero, insufficient, or not available from NFA.

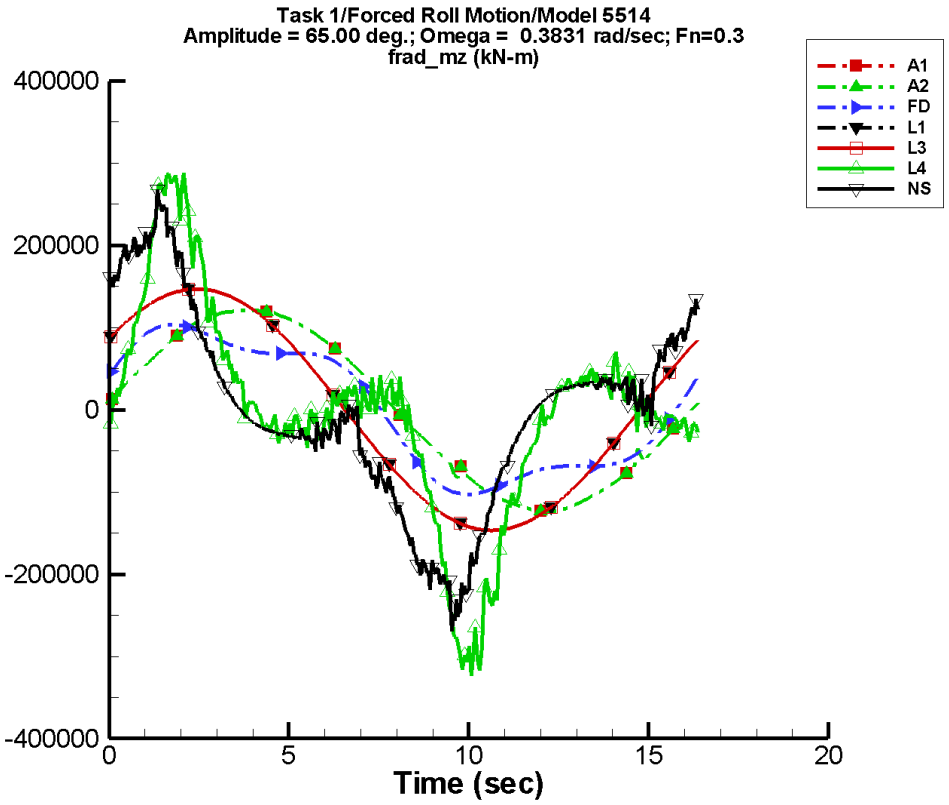
Figure D–564. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1127. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -45.5 | 8.42E+04 | 5 | 324. | 46 |
| A2 | -45.5 | 8.42E+04 | 5 | 324. | 46 |
| FD | 349. | 9.33E+04 | 17 | 1.82E+03 | 90 |
| L1 | -0.808 | 1.02E+05 | 36 | 0.109 | -119 |
| L3 | -1.69 | 1.02E+05 | 36 | 0.144 | -150 |
| L4 | 564. | 1.19E+05 | 32 | 1.06E+03 | 178 |
| NF | — | — | — | — | — |
| NS | 5.61 | 1.10E+05 | 70 | 29.0 | -126 |

Table D–1128. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -8.60E+04 | 8.67E+04 | -8.54E+04 | 8.38E+04 |
| A2 | -8.60E+04 | 8.67E+04 | -8.54E+04 | 8.38E+04 |
| FD | -8.86E+04 | 8.86E+04 | -8.83E+04 | 8.83E+04 |
| L1 | -1.02E+05 | 1.02E+05 | -1.01E+05 | 1.01E+05 |
| L3 | -1.02E+05 | 1.02E+05 | -1.01E+05 | 1.01E+05 |
| L4 | -1.68E+05 | 1.63E+05 | -1.59E+05 | 1.53E+05 |
| NF | — | — | — | — |
| NS | -1.39E+05 | 1.39E+05 | -1.29E+05 | 1.29E+05 |




Data identically zero, insufficient, or not available from NFA.

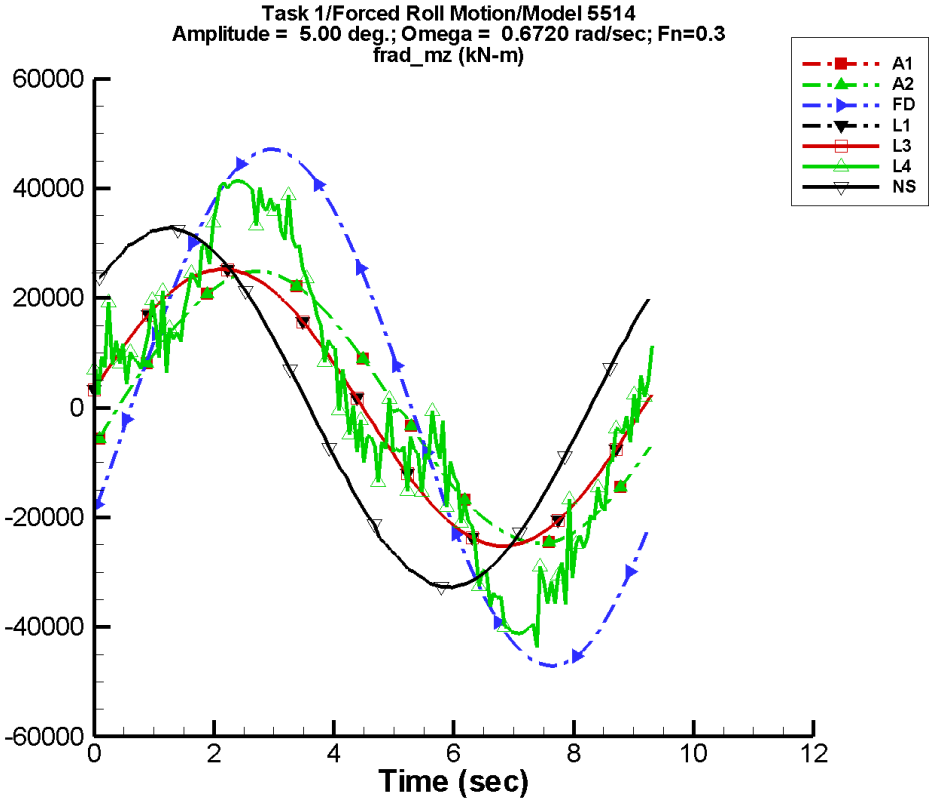
Figure D–565. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1129. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -65.7 | 1.22E+05 | 5 | 467. | 46 |
| A2 | -65.7 | 1.22E+05 | 5 | 467. | 46 |
| FD | 987. | 9.93E+04 | 21 | 5.13E+03 | 91 |
| L1 | -1.03 | 1.47E+05 | 36 | 0.288 | -123 |
| L3 | -1.84 | 1.47E+05 | 36 | 0.262 | -127 |
| L4 | 3.69E+03 | 1.36E+05 | 51 | 4.54E+03 | -44 |
| NF | — | — | — | — | — |
| NS | -17.2 | 1.44E+05 | 74 | 163. | 43 |

Table D–1130. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.24E+05 | 1.25E+05 | -1.23E+05 | 1.21E+05 |
| A2 | -1.24E+05 | 1.25E+05 | -1.23E+05 | 1.21E+05 |
| FD | -1.03E+05 | 1.03E+05 | -1.02E+05 | 1.02E+05 |
| L1 | -1.47E+05 | 1.47E+05 | -1.47E+05 | 1.47E+05 |
| L3 | -1.47E+05 | 1.47E+05 | -1.47E+05 | 1.47E+05 |
| L4 | -3.24E+05 | 2.88E+05 | -3.03E+05 | 2.77E+05 |
| NF | — | — | — | — |
| NS | -2.69E+05 | 2.68E+05 | -2.44E+05 | 2.47E+05 |




Data identically zero, insufficient, or not available from NFA.

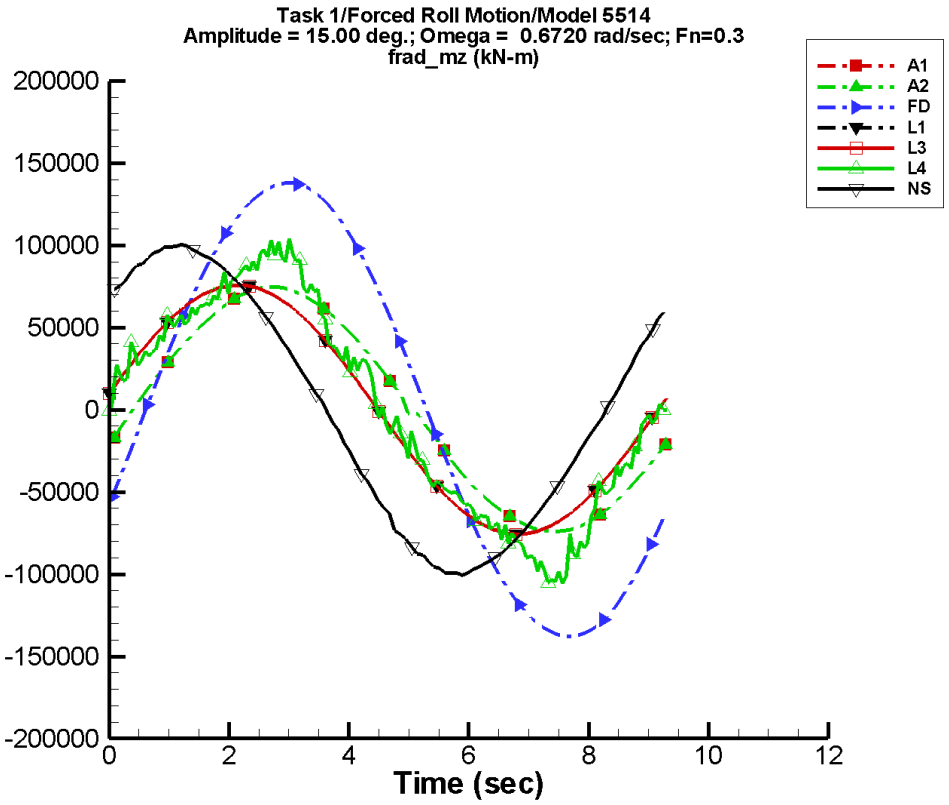
Figure D–566. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1131. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -20.3 | 2.46E+04 | -15 | 67.5 | -88 |
| A2 | -20.3 | 2.46E+04 | -15 | 67.5 | -88 |
| FD | 2.41 | 4.72E+04 | -24 | 6.01 | 125 |
| L1 | -0.634 | 2.52E+04 | 7 | 0.251 | -148 |
| L3 | -1.45 | 2.52E+04 | 7 | 6.81E-02 | -33 |
| L4 | 9.50 | 3.13E+04 | -2 | 1.15E+03 | 161 |
| NF | — | — | — | — | — |
| NS | -1.80 | 3.26E+04 | 42 | 5.07 | -144 |

Table D–1132. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.47E+04 | 2.49E+04 | -2.44E+04 | 2.45E+04 |
| A2 | -2.47E+04 | 2.49E+04 | -2.44E+04 | 2.45E+04 |
| FD | -4.71E+04 | 4.71E+04 | -4.66E+04 | 4.66E+04 |
| L1 | -2.52E+04 | 2.52E+04 | -2.51E+04 | 2.51E+04 |
| L3 | -2.52E+04 | 2.52E+04 | -2.51E+04 | 2.51E+04 |
| L4 | -4.36E+04 | 4.13E+04 | -4.04E+04 | 4.09E+04 |
| NF | — | — | — | — |
| NS | -3.29E+04 | 3.28E+04 | -3.24E+04 | 3.24E+04 |




Data identically zero, insufficient, or not available from NFA.

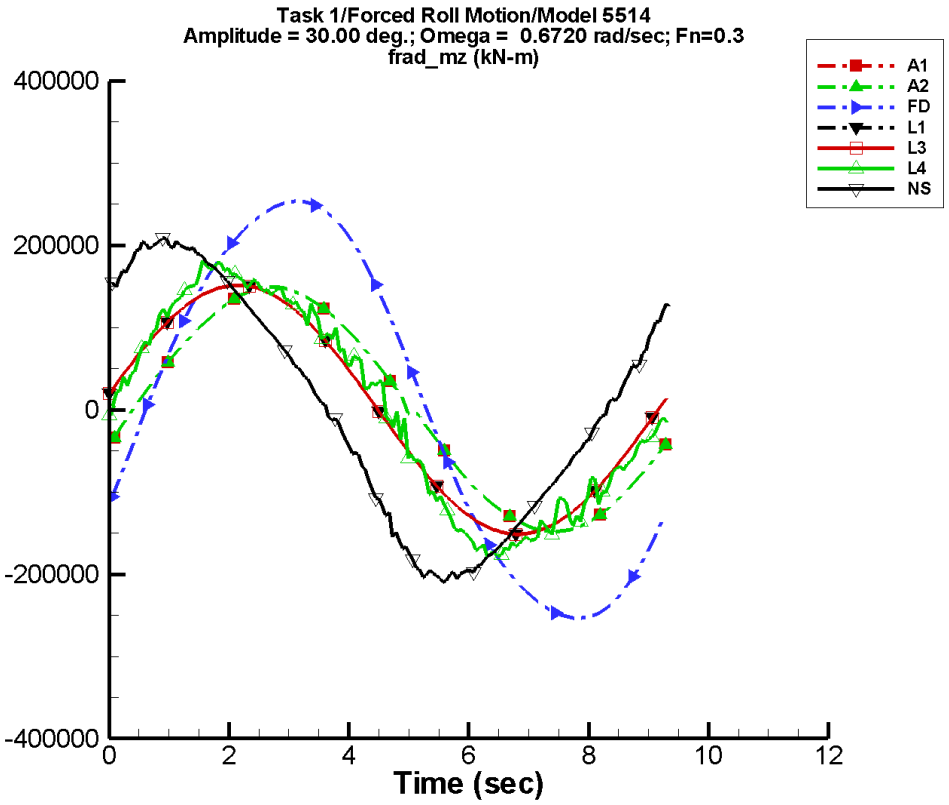
Figure D–567. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1133. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -60.9 | 7.36E+04 | -15 | 202. | -88 |
| A2 | -60.9 | 7.36E+04 | -15 | 202. | -88 |
| FD | 66.5 | 1.39E+05 | -24 | 160. | 124 |
| L1 | -0.643 | 7.57E+04 | 7 | 0.309 | -167 |
| L3 | -1.45 | 7.57E+04 | 7 | 7.09E-02 | 92 |
| L4 | 300. | 8.57E+04 | 0 | 2.85E+03 | 129 |
| NF | — | — | — | — | — |
| NS | -5.49 | 9.75E+04 | 42 | 9.14 | -172 |

Table D–1134. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -7.42E+04 | 7.46E+04 | -7.32E+04 | 7.36E+04 |
| A2 | -7.42E+04 | 7.46E+04 | -7.32E+04 | 7.36E+04 |
| FD | -1.38E+05 | 1.38E+05 | -1.36E+05 | 1.36E+05 |
| L1 | -7.57E+04 | 7.57E+04 | -7.54E+04 | 7.54E+04 |
| L3 | -7.57E+04 | 7.57E+04 | -7.54E+04 | 7.54E+04 |
| L4 | -1.06E+05 | 1.04E+05 | -1.00E+05 | 9.67E+04 |
| NF | — | — | — | — |
| NS | -1.01E+05 | 1.01E+05 | -9.84E+04 | 9.84E+04 |




Data identically zero, insufficient, or not available from NFA.

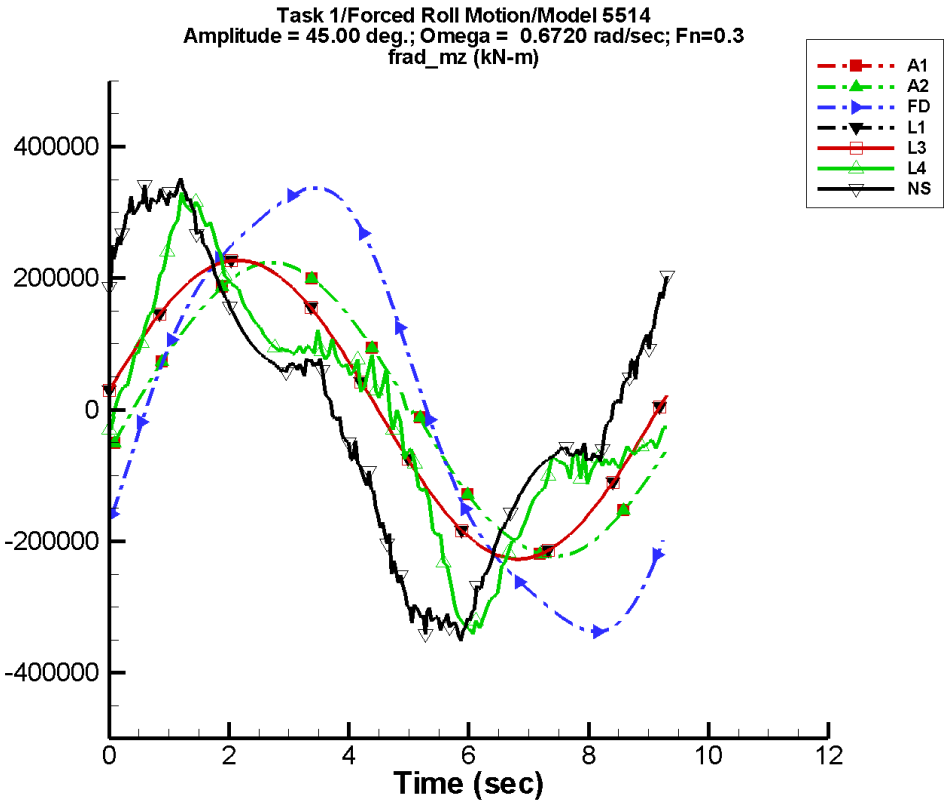
Figure D–568. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1135. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -122. | 1.47E+05 | -15 | 405. | -88 |
| A2 | -122. | 1.47E+05 | -15 | 405. | -88 |
| FD | 521. | 2.58E+05 | -25 | 1.26E+03 | 123 |
| L1 | -0.712 | 1.51E+05 | 7 | 0.715 | -179 |
| L3 | -1.52 | 1.51E+05 | 7 | 0.271 | 151 |
| L4 | 755. | 1.67E+05 | 6 | 3.07E+03 | -127 |
| NF | — | — | — | — | — |
| NS | -10.8 | 1.94E+05 | 44 | 5.62 | -163 |

Table D–1136. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -1.48E+05 | 1.49E+05 | -1.46E+05 | 1.47E+05 |
| A2 | -1.48E+05 | 1.49E+05 | -1.46E+05 | 1.47E+05 |
| FD | -2.54E+05 | 2.54E+05 | -2.51E+05 | 2.51E+05 |
| L1 | -1.51E+05 | 1.51E+05 | -1.51E+05 | 1.51E+05 |
| L3 | -1.51E+05 | 1.51E+05 | -1.51E+05 | 1.51E+05 |
| L4 | -1.79E+05 | 1.84E+05 | -1.73E+05 | 1.75E+05 |
| NF | — | — | — | — |
| NS | -2.09E+05 | 2.09E+05 | -2.03E+05 | 2.03E+05 |




Data identically zero, insufficient, or not available from NFA.

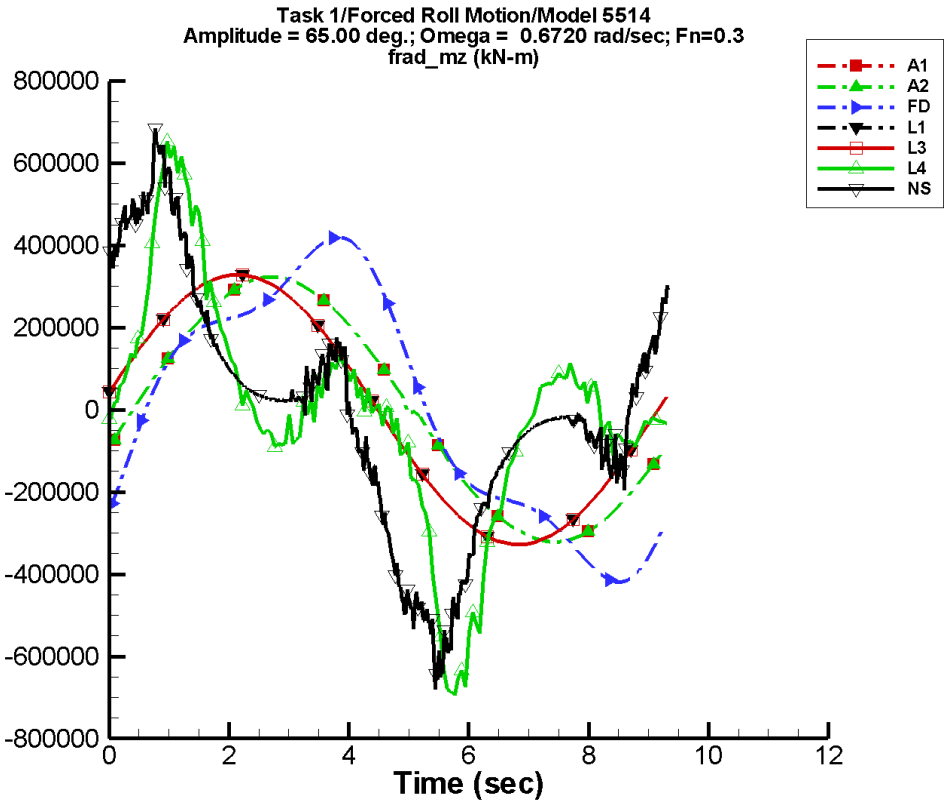
Figure D–569. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1137. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -183. | 2.21E+05 | -15 | 607. | -88 |
| A2 | -183. | 2.21E+05 | -15 | 607. | -88 |
| FD | 1.69E+03 | 3.40E+05 | -27 | 4.10E+03 | 123 |
| L1 | -0.797 | 2.27E+05 | 7 | 1.18 | 178 |
| L3 | -1.69 | 2.27E+05 | 7 | 0.705 | 161 |
| L4 | 571. | 2.25E+05 | 17 | 9.33E+03 | -62 |
| NF | — | — | — | — | — |
| NS | -2.37 | 2.74E+05 | 48 | 62.3 | -31 |

Table D–1138. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -2.23E+05 | 2.24E+05 | -2.20E+05 | 2.21E+05 |
| A2 | -2.23E+05 | 2.24E+05 | -2.20E+05 | 2.21E+05 |
| FD | -3.37E+05 | 3.37E+05 | -3.33E+05 | 3.33E+05 |
| L1 | -2.27E+05 | 2.27E+05 | -2.26E+05 | 2.26E+05 |
| L3 | -2.27E+05 | 2.27E+05 | -2.26E+05 | 2.26E+05 |
| L4 | -3.41E+05 | 3.37E+05 | -3.26E+05 | 3.09E+05 |
| NF | — | — | — | — |
| NS | -3.52E+05 | 3.52E+05 | -3.33E+05 | 3.33E+05 |




Data identically zero, insufficient, or not available from NFA.

Figure D–570. Time history of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Table D–1139. Coefficients of the Fourier fit $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \cdots$ of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| Code | $a_0$ (kN-m) | $a_1$ (kN-m) | $\Phi_1$ (deg) | $a_2$ (kN-m) | $\Phi_2$ (deg) |
|---|---|---|---|---|---|
| A1 | -264. | 3.19E+05 | -15 | 877. | -88 |
| A2 | -264. | 3.19E+05 | -15 | 877. | -88 |
| FD | 4.71E+03 | 3.71E+05 | -33 | 1.16E+04 | 122 |
| L1 | -1.03 | 3.28E+05 | 7 | 1.78 | 180 |
| L3 | -2.05 | 3.28E+05 | 7 | 0.918 | 165 |
| L4 | 8.89E+03 | 3.04E+05 | 43 | 2.46E+04 | -41 |
| NF | — | — | — | — | — |
| NS | -194. | 3.53E+05 | 54 | 153. | 94 |

Table D–1140. Minimum and maximum of of $M_z^{\text{rad}}$ for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

| | Unfiltered | | Filtered | |
|---|---|---|---|---|
| Code | Minimum (kN-m) | Maximum (kN-m) | Minimum (kN-m) | Maximum (kN-m) |
| A1 | -3.21E+05 | 3.23E+05 | -3.17E+05 | 3.19E+05 |
| A2 | -3.21E+05 | 3.23E+05 | -3.17E+05 | 3.19E+05 |
| FD | -4.19E+05 | 4.19E+05 | -4.08E+05 | 4.08E+05 |
| L1 | -3.28E+05 | 3.28E+05 | -3.27E+05 | 3.27E+05 |
| L3 | -3.28E+05 | 3.28E+05 | -3.27E+05 | 3.27E+05 |
| L4 | -6.94E+05 | 6.53E+05 | -6.46E+05 | 6.03E+05 |
| NF | — | — | — | — |
| NS | -6.80E+05 | 6.83E+05 | -6.23E+05 | 6.33E+05 |